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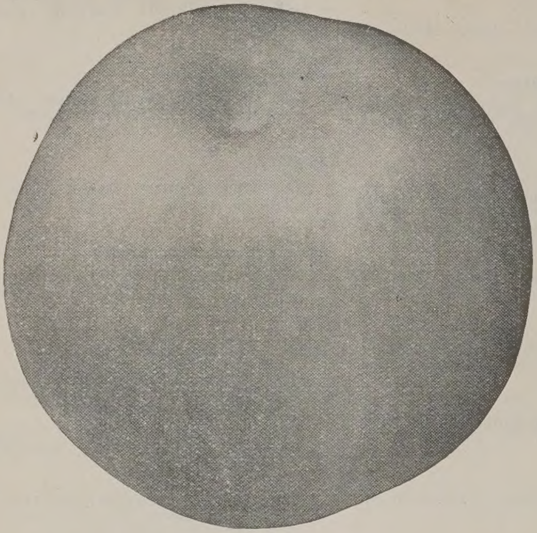

Jonathan.

FRUIT TREES

Mr. Commercial Grower!

AN OPEN LETTER

Vast possibilities await the man who looks ahead—not next year or the year after, but for many years. Can he visualise the millions of people in this great universe who want fruit? Now, Sir! think for yourself—a marketing business has been instrumental in placing before these fruit-hungry people the ways and means of supplying this great necessity of life.—One man, first try, first season, sold 55,000 cases Apples, and this season something like 120,000 will be the figures sold in this way. It has been done, and will be done, that we venture to say that in 5 years hence Australia will not have a surplus, but a shortage of hundreds of thousands cases of fruit. Get busy—for your old orchards will be going back, and you will not have the fruit when required. Get in on the boom.

Information, etc., from

JOHN BRUNNING & SONS

SOMERVILLE NURSERIES - SOMERVILLE - VICTORIA - AUST

Established 1866. Code: Bentley's Complete Phrase.

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers' MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. **Advertising rates may be had on application to our Head Office, or to agents in the various States**

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement notwithstanding the fact that a contract may have been entered into for the use of a certain space.

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Tasmanian Director:

Hon. L. SHOOBRIDGE, M.L.C.

AUSTRALIANS IN INDIA.

A Cordial Invitation to Visit Mysore.

A cordial invitation to Australians while in India to visit Mysore is to hand per medium of Mr. A. E. Hyland, Director, Australian Trade Publicity, London, England.

The invitation is from Mr. A. T. Isaac, Gangentati Estate, Tranerkere Post Office, Bangalore City, Mysore, India, who says that any Australian fruitgrower passing through Mysore in India will be made very welcome by him.

We feel sure that this kind action of Mr. Isaac's will be appreciated by Australian fruitgrowers who visit India.

PERSONAL.

Mr. H. S. Taylor, editor of the "Murray Pioneer" and the "Australian Dried Fruits News," is reported to be progressing satisfactorily after his recent operation.

Each of us has the power of making happier, sunnier, the little spot wherein our daily life is spent.—Archbishop of Canterbury.

The Manuring of Apples Increases Crops

(By P. H. Thomas, Chief Horticulturist, Tasmanian Dept. of Agriculture)

The details of the third season of the Jonathan manurial trials at Glengarry have now been collected, and some interesting results obtained.

It will be remembered that this plot was selected in 1926 in order to test out the value of the plant foods applied to the plants in different forms. The following treatments were given:—

Plot A.—Blood and bone (16 per cent. phos., 5 per cent. nit.), 5 cwt.; sph. pot., 1½ cwt. per acre.

Plot B.—Super., 5 cwt.; sph. amm., 1½ cwt.; sph. pot., 1½ cwt. per acre.

Plot C.—No manure.

Records of yield and size of fruit from each of the above plots were kept from 1926-29, and these appear in Table 1.

From the second table it will be seen that for an outlay of 10d. per tree in plot A, and 9d. per tree in plot B, increased returns of .3 and .4 bushels of fruit, worth about 2/- at ordinary market prices, have been obtained. For large acreages the advantage of using the cheaper formula in plot B can be seen, and in the present experiment even slightly better results were obtained from this mixture. Observations on the growth and general vigor of the trees in the various plots were also made, and it was particularly noticeable the way in which plots A and B showed up when compared with the unmanured plot C. Little difference, however, could be noticed between plots A and B, both of which were growing vigorously.

This work was made possible by the co-operation of Mr. F. Bruford and the Electrolytic Zinc Co., with the horticultural officers of the Department of Agriculture.

Table 1. Yield Records.

Plot.	Sizes.	1927. Bushels.	1928. Bushels.	1929. Bushels.		Total. Bushels.
Plot A. 63 trees.	3	11	14	31	84%	56
	2¾	37	54	51		142
	2½	51	102	13		166
	2¼ and under	18	49	2		69
	Total	117	219	97		433
	Yields	Per tree. 1.86	Per tree. 3.48	Per tree. 1.54		Average Per tree. 2.30
Plot B. 77 trees.	3	14	21	59	83.5	94
	2¾	41	75	41		157
	2½	64	128	22		214
	2¼ and under	40	49	3		92
	Total	159	273	125		557
	Yields	Per tree. 2.06	Per tree. 3.55	Per tree. 1.62		Per tree. 2.40
Plot C. 70 trees.	3	2	3	2	55.6	7
	2¾	12	19	6		37
	2½	56	72	2		130
	2¼ and under	53	85	1		139
	Total	123	179	*11		313
	Yields	Per tree. 1.76	Per tree. 2.56	Per tree. .55		Per tree. 2.0

*20 trees in 1929.

Table 2. Cost of Manure.

Application and cost per acre.			Approx. cost per tree (20ft. sq.) per acre.	Av. yield per tree per acre.	Increase yield due to manuring.	Cost manure per bus. fruit.
Plot A.—63 Trees—				Bushels.	Bushels.	Pence.
Blood and bone ..	5 cwt.	£3 5 0	10d.	2.3	.3	4.3
Sph. potash	1½ „	1 3 0				
		£4 8 0				
Plot B—						
Super.	5 cwt.	£1 8 9	9d.	2.4	.4	3.75
Sph. Amm.	1½ „	1 8 4				
Sph. pot.	1½ „	1 2 11				
		£4 0 0				
Plot C—						
No manure		—	—	2.0	—	—

LIVERPOOL.

The report of the Mersey Docks and Harbor Board for the year ended July 1, 1929, has been received. The Chairman, in his report, states that last year was the greatest year in tonnage in normal circumstances. The tonnage of vessels paying dock tonnage rates was 15,553,104 tons, an increase of 306,983 tons on the previous year.

The total income was £3,394,691/15/6, and the total net increase in the revenue, £164,882.

West Australian Fruitgrowers' Conference.

Export and Local Marketing.

Dump Case Preferred for Export.

Export of "Plain" Grade Apples Desired.

THE annual conference of the West Australian Fruitgrowers' Association was held on November 26 and 27, at Perth, Rev. F. Davis, presiding. The conference was officially opened by Mr. Millingdon, Hon. Minister for Agriculture.

Owing to the unavoidable absence of the Hon. Secretary, Mr. W. H. Whittel, the Chairman asked Mr. A. T. Booth (Mt. Barker), to act as Secretary during the conference.

The reports of the Secretary and President were received with appreciation.

W.A. Citrus Association.—The W.A. Citrus Association wrote asking to affiliate; as the constitution did not provide for this, the Executive was instructed to go into the matter of amending the constitution.

Cool Store at Fremantle.—It was decided, on the motion of Messrs. O. Sparks (Bridgetown), and Simper (Spearwood), that in the opinion of this conference, cool storage facilities for export fruit are urgently required adjacent to Fremantle wharf.

It was decided to request that fruit for the interstate trade be inspected and passed in the same way as fruit for export. Additional covered trucks for the fruit season were requested.

Eastern Trade.—Decided, on the motion of Messrs. Simper (Spearwood) and J. Ramage (Bridgetown) to request the Government to assist fruitgrowers by arranging for the s.s. "Kangaroo" to be made available during the fruit season for at least three trips to Java and Singapore from the middle of February to the end of May.

Export.—It was resolved to recommend that the "plain" grade in export fruit be allowed; that the use of sizes as well as numbers for grading export fruit remain optional: also that the W.A. Fruit Shippers' Committee be recommended to give great consideration when booking space in early boats when a heavy crop is expected.

The following items sent forward by the W.A. Fruit Shippers' Committee were adopted:—

1. That corrugated cardboard be used on sides, tops and bottoms of all dump cases.

2. That cement-coated nails be used instead of the ordinary type, with a minimum length of 1 inch on sides, and 1¼ inches on the top and bottom.

3. That half-bushel cases packed with cardboard and wood-wool be the only types of cases used for Pears.

4. The half-bushel cases only be used for small dessert or kitchen Pears.

5. That trays only be used for high-class Pears of larger grades.

6. That where corrugated cardboard is used the corrugations be placed next to the wood.

7. That no 2¾ inch Jonathans be shipped in seasons of light crops.

It was further agreed to appoint two representatives to meet the Fruit Shippers' Committee, together with the Horticultural Superintendent, Mr. Wickens, and confer with saw millers to arrive at the best methods of handling fruit case timber and other matters.

Dump Cases for Export.—It was decided, on the motion of Messrs. Thomas (Mt. Barker) and Martin (Mt. Barker) to support the use of the Australian dump case for exporting West Australian Apples.

Conference further resolved to request permission for the ends of cases to be "smoothly sawn" instead of "dressed."

Trade With Germany.—Decided that vigorous efforts be made to have the duty on Australian Apples to Germany reduced to the same rate as Apples from New Zealand and America.

Australian Conference of Fruitgrowers.—Decided, on the motion of Messrs. Sparks (Bridgetown) and Cross (Argyle), that there be an instruction to the incoming executive to do their best to arrange for two delegates to attend the interstate conference to be held in Tasmania in May, 1930, and that the Government be asked to assist in the expenses.

Conference decided to request the Gerrard Wire Tying Co. to reduce the rental of machines, as fruitgrowers used them for such a short period of the year; that the "Twenty-eight" parrots and other fruit-eating parrots be brought under the Vermin Act, and a reward paid for their destruction; that the Government be requested to complete the Nornalup-Pemberton railway. A committee of two (Messrs. Simpson, of Karragullen, and Booth, Mt. Barker) was appointed to report on general matters affecting the industry.

A resolution was submitted from Mt. Barker, requesting the modification of the regulation which prohibited the sale of fruit in bags in order to prevent Apples being sold in bags during March and April. This resolution was lost, and it was decided to advise the Agricultural Department that Apples in bags had been sent from Mt. Barker for sale during the past season.

Another motion which was lost was one from Eastern Hills, requesting the fixing of minimum prices in the local market.

Election of Office-bearers.—Mr. J. Martin was elected President, and Mr. Lake, Vice-President; the Executive to be formed from representatives as follows:—Mt. Barker 3, Bridgetown 1, Manjimup 1, Albany 1, Argyle 1, together with President and Vice-President, and that each Association appoint their own member, and notify the Secretary of the Association at Mt. Barker which will be the headquarters of the Association for the ensuing twelve months.

Votes of thanks were carried to the retiring President (Rev. F. Davis), Government officials, and Mr. A. T. Booth, for acting as Secretary.

After the close of the conference, a Centenary Dinner was held at the Savoy Hotel, at which the Minister of Agriculture was present and other Members of Parliament.

FRUIT CROPS IN WESTERN AUSTRALIA.

Bickley.

"It looks now as if there will be a very heavy crop in this district, mainly citrus," writes Mr. A. C. R. Loaring, of Bickley, W.A., on December 9.

Stone crop is abnormally heavy this year, and the season has been very favorable owing to the late rains. Just now it has been raining quite a lot, and this will be beneficial to Peaches and Nectarines, etc. Rain is unusual with us at this time of the year. There is little to report here in the way of development, the district being fairly old established, but the orchards generally are looking well and orchardists seem to be doing well.

It may interest you to know I have made a small plantation of Walnuts this last planting season. I had previously planted a few trees to try them, and, although only planted eight years, they have come into full bearing. I have now planted about two acres of same.

WESTERN AUSTRALIA.

Apple Crop Light: Stone Fruits Heavy.

Mr. Geo. W. Wickens, Superintendent of Horticulture for W.A., writes under date December 18:—

The Apple crop in Western Australia for season 1929-30 will be a light one. I estimate it will amount to 380,000 bushels, or about one-third of last season's, which was 1,122,713 bushels.

Pears set well, and promised early in the season to create a record, but the wet, humid weather experienced in November made ideal conditions for black spot (Venturia pirina), which has taken a considerable toll of the fruit. My estimate is 100,000 bushels: last season 98,544 bushels were produced.

The stone fruit crop is heavy.

Plums.—Last season's production, 51,694 bushels; my estimate this season, 68,000 bushels.

Apricots.—Last season's production, 33,073 bushels; my estimate this season, 50,000 bushels.

Peaches.—Last season's production, 42,348 bushels; my estimate this season, 56,000 bushels.

Nectarines.—Last season's production, 9,546 bushels; my estimate this season, 12,000 bushels.

Grapes.—Table, drying and wine varieties are all carrying good to heavy crops.

Mount Barker.

Mr. J. McN. Martin, Mt. Barker Estate, reports under date December 13:—The principal fruits in this district are Apples and Pears.

Apples, export, Jonathan, Cleo., and Dunn's. Granny Smith is being exported more as this variety comes in. Yates, Rokewood, and to a diminishing extent Rome Beauty, are the principal local market Apples, with Grannies on the increase.

Pears.—B. Bosc, W. Nelis, Josephine, and a lesser extent Glou Morceau, for export, a few odd lines as well, but these are the principal ones, the local market being neglible.

The crop is the lightest for years. A peculiar feature is that small patches and odd rows have heavy crops, while around Albany most of the growers are in for their third heavy crop in succession.

One Year Old Peaches at the Nursery of C. J. Goodman, Bairnsdale, Vic.

Rebuilding of present premises will be begun early in January to meet the expected expansion of the old business that the new log has acquired.

Had this year been normal, several district developments would have been pushed on with. However, the Fruitgrowers' Co-operative Co. has formed a subsidiary company, allowing all and sundry in, to start retail stores.

A Cheerful Suggestion.

There's not much of local interest, beyond the Australian Eleven prospects being not too bright if they can't produce bowlers. The team might come over here to get licked into shape before going to England (growers here will have plenty of time on their hands this year).

December "Fruit World"

Delayed Delivery

Although the December issue of the "Fruit World" was printed as usual and despatched to the Post Office for mailing, there was considerable delay in posting owing to an accident which befel the carrier.

We did not discover this matter until letters came in from readers. Enquiries were instituted, and after some delay it was discovered that the carrier had not delivered the copies for posting as usual. However, this omission has since been rectified.

Those of our readers who obtain their copies from newsagents, however, will not have suffered any delay.

This explanation is published to free the Post Office from any blame regarding late delivery.

NEW ZEALAND.

1,000,000 cases for export.

Mr. J. A. Campbell, Director of the Horticulture Division, Department of Agriculture, Wellington, New Zealand, reports that during the coming export season it is anticipated that the total quantity of fruit shipped will be in the vicinity of one million cases.

Apples from Chili.—Apples from Chili are now finding their way to the British and Continental fruit markets. There is a reduced demand for Australian Black Currant pulp in England.

Victorian Fruit Crops.

Seasonable Report for the Month of December, 1929.

Kind of Fruit and Percentage Estimate of Normal Crop.

District.	Almonds.	Apples.	Apricots.	Berry Fruits.	Cherries.	Figs.	Peaches.	Pears.	Plums and Prunes.	Passion Fruit.	Quinces.	Walnuts.
Doncaster . . .	—	85	90	85	75	—	60	65	40	—	70	—
Burwood	50	80	60	100	60	50	75	80	60	5	70	50
Gippsland	70	85	90	70	80	70	80	90	80	25	70	70
Peninsula . . .	—	90	75	100	60	—	65	65	60	—	100	—
Diamond Ck. . .	—	95	—	100	100	—	25	95	75	—	100	—
Western	10	75	50	—	50	—	50	100	25	—	80	—
Wimmera	5	95	12	—	50	—	50	75	50	—	50	25
Northern	—	35	25	—	25	—	40	40	25	—	—	—
Kyabram	75	80	120	—	80	100	110	75	60	—	100	—
Murray	80	100	100	—	—	100	95	80	75	—	—	—
Shepparton	80	100	100	—	80	100	100	80	100	—	100	—
N. Eastern . . .	25	75	100	100	75	100	50	75	75	60	75	—

Remarks.—Burwood District: Passion vines badly damaged by late frost. Wimmera District: Late frost very severe on Apricots and Almonds. Northern District: October frost destroyed large percentage of all kinds of fruit. Murray District: Few Apples grown. North-Eastern District: October frost destroyed Walnuts.

The weather conditions since the setting of fruit have been favorable to the development of fungous diseases. Up to the present, however, these diseases are being successfully controlled.

Viticulture.

THE vineyards look remarkably well—healthy dark green foliage and very large leaves, especially where well worked.

Blossom has been satisfactory, though uneven, owing to the changeable weather; some bunches having quite set before others shed their caps. On the whole, the setting has been very good and where frost has spared the vines there is an abundant crop showing, provided timely rain falls.

In the irrigated areas the vines look remarkably well; the dry conditions have prevented further spread of black spot, and there has, so far, been no appearance of downy mildew.

Currants show heavy crops. Sultanas on the whole scarcely promise so well as last year. Dropping of berries has been complained of in some cases, but it is premature to forecast its effect on the yield.

Citrus.

The prospects for the coming season's crop are excellent. Reports from the various citrus districts show that the trees are looking well, and that there is a very good crop in all varieties. Prices for Valencia Late and navel Oranges from late districts are well maintained. Lemons are in demand at increased prices.—J. M. Ward, Superintendent of Horticulture.

MR. MEEKING VISITING ENGLAND.

Opportunity for Securing a Valuable Report.

AS Mr. E. E. Meeking, Senior Fruit Inspector for Victoria, is visiting England on a vacation in March, the suggestion has been made from various quarters that he be authorised to give a comprehensive report of the 1930 fruit season in Great Britain.

The editor is in receipt of letters from growers, and acknowledges personal calls from other growers, requesting that publicity be given to their request for Mr. Meeking's services to be made available.

Mr. Meeking is a trusted officer, and has had many years of experience in the handling of export fruit. He is in a unique position to give a valuable report on the conditions relating to packing, grading, maturity, cases, wiring, storing, temperatures, handling and other matters affecting export. He knows conditions in the other States, and is familiar with the country inspection system: it is felt that if he were authorised by the State or Federal Government to examine fruit on its arrival in London, and give a comprehensive report, this would be of very practical service to the fruit industry.

* * *

We add our endorsement to the requests that Mr. Meeking's valued services be thus made available.

SHEPPARTON FRUIT PRESERVING CO. LTD.

All Government Loans Paid Off.

Dividend of 10 per Cent.

The twelfth annual report and balance sheet of Shepparton Fruit Preserving Co. Ltd., is satisfactory. The year's profit was £43,345/12/5, which, added to the credit balance of £4,316/6/9 brought forward, makes a total of £47,661/19/2. It is proposed to allocate this as follows:— £30,000 to reserve fund (making the reserve fund £100,497/15/9), £7,000 to taxation reserve, leaving a sum of £10,661/19/2, out of which the directors recommend a dividend on paid-up capital of 10 per cent., together with a bonus of 5 per cent., which will absorb £4,700/5/9, leaving a balance of £5,961/13/5 to be carried forward.

To strengthen the capital 29,284 shares were issued, and all were taken up by shareholders. Satisfactory arrangements have been entered into with the Commonwealth Bank of Australia for necessary finance. The whole of the company's liabilities to the Government have been paid off. The turnover of £499,780/1/7 was a record. Further extensions to buildings and plant have been found necessary, and are now nearing completion. £9,317/5/- was written off depreciation, making the total depreciation to date £56,212/14/11.

Progress has been made in all departments, and as the outlook for canned fruits on the overseas markets is encouraging, the directors believe that another satisfactory year's business may be anticipated.

VICTORIAN FRUIT MARKETING ASSOCIATION.

A ballot was recently conducted for the election of the Executive of the Fruit Marketing Association. The following were elected:—President, Mr. H. G. Colombie; Executive: Shippers—Messrs. F. R. Mellor, A. S. Harrison, J. B. Mills, F. Cave, J. Barker, C. Parnham; District Representatives: Gippsland—J. W. Bailey (Narre Warren), W. H. Carne (Pakenham Upper); Metropolitan—E. I. Lawford (Doncaster), W. A. Webb (Doncaster); Mornington Peninsula—C. Griffeth (Moorooduc), G. W. Brown (Red Hill); Harcourt District—H. Ford, K. V. Eagle; N.W. District—R. E. Fowler.

TYABB.

A Progressive District.

FRUITGROWERS AT TYABB, on the Mornington Peninsula, recognising the necessity of maintaining their industry in an efficient state, have for long past given consideration to the problems affecting them, but during the last year or two even more attention has been given these matters.

Improvements in orchard management and the handling of fruit show a steady advance, and there is general appreciation of the advantages of organisation when applied wisely. New products for spraying and manuring are tried out, and as a result of the tests either adopted or rejected.

Efficient pruning, adequate cultivation and judicious manuring are producing in the district fruit of a quality that is highly appreciated in the markets to which it finds its way.

The fact that much of the fruit consigned to salesmen does not actually enter the markets, but is distributed direct from the rail, is an indication of the confidence placed in the district's output by distributing firms.

The marketing of orchard produce is a matter requiring serious attention from all those who seek a livelihood from fruit production; the necessity for careful handling; efficient and standardised packing and grading; the use of cases of good appearance, are essentials genenally admitted by progressive growers.

The method of placing fruit on the market so as to realise for the orchardist the best result, also calls for attention. It is conceded by those concerned with distribution, that a specific pack of fruit should reach the retailer through one channel, so that supplies of a favored brand may be accessible to him, and so gain the most favorable selling conditions.

Co-operative Trading.

The organisation responsible for the commercial aspect of the industry in the Tyabb district is the Tyabb Co-operative Trading and Cool Stores Limited. Recently, this name was adopted, having been changed from the title under which it operated from its formation, viz.: the Tyabb & District Co-operative Cool Stores Ltd.; the new name more clearly describes the nature of the business.

At its inception, the functions of the company were confined to the cool storage of fruit, but its activities were gradually extended until, at the present time, it undertakes the purchase and distribution of all orchardists' and farmers' supplies on a comprehensive scale, and the packing, shipping, purchase and sale of fruit. These matters, embracing all the business side of the fruitgrowers' operations, relieve him of much detail work and secure for him the substantial advantages accruing through co-operative effort.

Enlarging the Packing Shed.

The company's packing department handles most of the overseas export of the district, and a large proportion of interstate shipments. In preparation for the coming season the packing shed is being again enlarged; new equipment will be installed, bringing the establishment in line with modern requirements and making for speedy and economical dispatch of produce. Fruit delivered from the orchards at the receiving end of the shed will be treated and packed at the grader; travel by conveyors to lidding and wiring machines, and reach the railway trucks at the other end of the building ready for despatch to its destination. The standard Canadian case, attractively labelled, will be used for export.

Standardisation and Export.

The company has arranged to put up a pack of standardised Apples for its shareholders, identified by its own label; carrying out the principle of confining distribution to one channel, it has established an agency in England to handle exclusively this brand of fruit, to which direct shipments will be made.

A commercial cable code has been adopted for use in transacting or use as business, and a cable address registered.

Apples and Pears are the fruits that chiefly interest growers here, and consequently are the fruits most generally handled by the company.

RED HILL.

The principal fruits grown here are:—

Apples.—Jonathan, Rome Beauty, Yates', Rokewood, Five Crowns, principally, while Delicious, Tasma, and Granny Smith, have been planted of late years.

Pears.—Packham's Triumph, Beurre Bosc, Howell. Crop prospects are for a fair average crop, much better than last season.

District Developments.

New cool store and packing shed are being built to replace the one destroyed by fire last year.

When complete the cool store will be one of the most up to date in the State; capacity about 24,000 cases.

Many new growers planted largely of Apples during the past season.

Strawberries.

Large quantities of Strawberries have been planted, especially by new settlers. Varieties: Wilson's Pride, Sunbeam, and Improved Sunbeam. Good crops are being obtained, although prices are lower than usual on account of cool weather.

A new settlement has been started at Red Hill South on the Railway Estate; this property was sub-divided into blocks from 7 to 25 acres, and sold on easy terms, many of the blocks were practically cleared, and settlers got an early start.

Many settlers came from Mildura, Merbein, Red Cliffs, Picola, Rubicon, Tasmania, New South Wales, and one from Queensland. A new State school is to be erected close to the estate, and the Shire Council intend making a metal road at an early date. New settlers grow large quantities of vegetables, Peas, Beans, Tomatoes, and Potatoes, some are planting flowers, with the intention of marketing.

Red Hill, being only 45 miles from Melbourne, is well used by motor transport, and in most cases the produce is taken direct from the farm to the Melbourne markets.

One grower in the district has 20,000 Tomatoes, half of which will be staked, and in addition, goes in for Peas; also 200,000 daffodils, 40,000 nerines, 50,000 tiger lilies, 2,000 ericas, as well as other flowering plants.

Ninety acres of Potatoes have been planted by one grower at Flinders, who came from Woodend. The crop is looking well, and good returns are expected.

We have had wonderful rains, over 39 inches to date, and there is an abundance of feed and growth everywhere.

—G. Higgins.

PAKENHAM UPPER.

The principal fruit grown in this district is the Apple. The main varieties are Jonathan, Yates, Rokewood, Delicious, and Statesman. During the past four or five years, what few plantings there have been, have included a considerable proportion of Granny Smith, and Red Statesman.

The prospects are for a normally good crop, but not nearly so heavy as in 1928, probably 80 per cent. of that year's total. Jonathans, light to medium; Yates, medium to heavy; Rokewood, heavy; Statesman, medium to heavy.

The crop last season was exceptionally light, about 10 per cent. of normal.

District Notes.

Comparatively little planting has taken place in this district during recent years.

Pakenham is the centre of the district covered by the Gippsland Fruit Marketing Association Limited, which commenced activities in 1928, establishing a standardised pack which was shipped under the "Opossum" label. The district extends from Narre Warren to Bunyip, and it is anticipated that the quantity to be shipped under this label for the coming season will be in the vicinity of 50,000. The fruit will be packed in the Canadian "Standard" case, and wrapped in printed wrappers.

A commodious cool storage plant is being erected at "Valley View" orchard, Pakenham Upper, the property of Messrs. Woolf Bros. The building is being constructed on the most up-to-date lines, and will be equipped with the best plant.

The weather has been very broken, and unfavorable for spraying operations. The rainfall has been abnormally copious, 41 inches having fallen at Pakenham Upper, since the beginning of the year, to November 27. Growers have been taking extra precautions to cope with black spot, which is more or less in evidence, but mostly on the leaves only.

—W. H. Carne.

Pakenham Upper, 28/11/29.

Doncaster.—Mr. A. F. Thiele writes, 12/12/29:—The principal fruits here are Peaches, Pears, and Lemons. Pears are chiefly Williams, Beurre Bosc, Packham's.

Peaches are so numerous that it is not easy to say which variety is mostly grown—they are nearly all local seedlings. There is a heavy crop of all varieties.

I hear that a large quantity of Pears are to be sent to Europe this season.

A Fatherly Interest.

Commanding Officer (addressing raw recruit) "Now, my man, I want you to regard the regiment as a big band of brothers and me as the father of the regiment. Are you sure you understand?"

Recruit: "Yes, dad."

Plant Research

Good Work at Burnley, Vic.

THE PLANT RESEARCH LABORATORY, established by the Victorian Department of Agriculture at Burnley, is a useful institution. Up till recently this science work was conducted at 605 Flinders-street, Melbourne. The move to Burnley was a good one. The laboratory has been established in the Burnley Gardens, a few minutes tram ride from the city.

The officer in charge is Mr. Charles French, who now holds the position of Government Biologist, though he still specialises in entomology. Other members of the staff include Mr. D. B. Adam, B.Sc., plant pathologist; Mr. S. Fish, M.Ag.Sc.; Assistant Plant Pathologist; Mr. R. Pescott, Assistant to Entomologist; and Mr. G. B. Tindale, B.Sc., Cool Storage Research Officer.

The two main sections are entomology and plant pathology. The building contains a very fine entomological and pathological library and museum, and ample laboratory facilities.

There is also an insectarium and a greenhouse. Soil temperatures can be controlled by means of soil temperature tanks, thus enabling many scientific experiments to be carried out.

Much useful work of a scientific and practical nature has already been accomplished by the talented and efficient staff. This laboratory also provides a rallying point for other experiments in co-operation with the Council for Scientific and Industrial Research, the Agricultural Departments in the other States, and the Waite Research Institute in South Australia, etc.

One cannot fail to notice,. however, that much of the time of the science officers is taken up with what might be termed the routine work of diagnosis and reporting on specimens of pests and plant diseases which are submitted to Departmental Officers by commercial growers, suburban householders, and members of the general public.

Apart from this work each officer is assigned a particular problem which he investigates. The laboratory side of the investigation serves as the basis for the field experimental work.

While it is pleasing to notice the good work that has already been accomplished, it is hoped that increased opportunities will be given the officers for research work.

1930 Apple Export Season.

Victoria Expects to Ship 900,000 Cases.

Inspection will be Strict.

The 1930 Apple export season in Victoria, to some extent resembles 1928, when 987,000 cases were exported, states Mr. J. M. Ward, Superintendent of Horticulture, in a careful review of the coming season's export programme. In a broadcast talk to growers from 3LO, Mr. Ward dealt at length with the season's vagaries, crop prospects, maturity for export, grading, packing, etc. A summary is as follows.

In the coming season, space is booked for over 900,000 cases, and there is every indication that space will be filled, despite frosts, hailstorms, and unfavorable weather. However, the quantity of "standard" grade Apples has been reduced. In 1928 Victoria had a record crop of nearly 4,000,000 bushels, of which approximately 3,000,000 were marketed in Australia. This season growers realise the necessity for large exports because of the smaller crops in U.S.A. and Canada; also on account of the fairly heavy crops in Tasmania, South Australia and New South Wales competition for sales in Australia will be keen.

Maturity Standards.

Close inspection will be made for Apples picked too early for shipment. It is impossible yet to define a maturity standard for each district. Growers must exercise good judgment; February is too soon for Jonathans, and March too soon for Yates. Immature fruit will be rejected. Under the regulations of the Commerce Act, inspection will be strict and the grade standards rigidly enforced. Any Apples branded, say 2¼ in., and which do not comply with the brand, will be rejected, and the same applies with 2¾ in. and other sizes. Some growers brand cases 2¼ in. and pack Apples below this size; in the 2¾ in. grades some growers pack 3 in. Apples; a 3 in. Apple is not a 2¾ in. Apple; mixing of sizes is not allowed, and such fruit will be rejected.

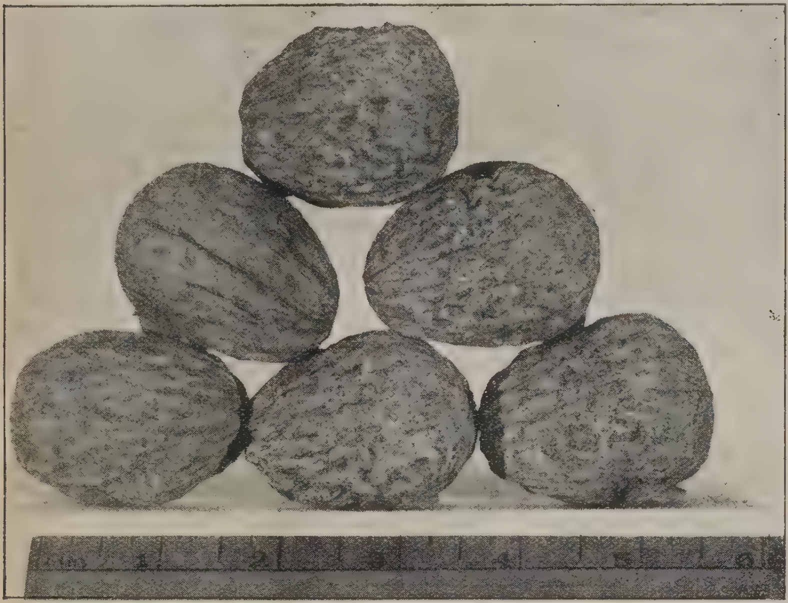
Neat Cases Essential.

Growers have at times submitted good fruit for export in dirty-looking, ill-made cases, and inspectors will be more strict than ever in rejecting such during the coming season.

Slack packs are improper for export. Invariably this is due to the "flat" pack, i.e., Apples packed with stalk end down. These open up badly at destination, cases being very slack or overfilled with Apples bruised. Fortunately, such packing is only done in one or two old-fashioned districts by comparatively few growers who have not improved their methods.

Losses With Warm Fruit.

Fruit should be picked some time before packing to give it an opportunity to cool off. Much loss is caused by growers picking when the fruit is warm, packing into hot cases, stacking in hot shed or railway truck. It is quite common for the actual fruit to be at a temperature of 70 deg. F. at Port Melbourne, awaiting shipment; some fruit registers 85 deg. F. There is little hope of this fruit carrying safely.



Australian raised "Wilson's Wonder," thin shelled, prolific bearer.

Rejections in 1928.

Of a total of 906,469 cases of Apples shipped to England and Europe in 1928, 21,738 cases were rejected at the ship's side by inspectors, as follows:—4,833 cases, bitter pit; 1,489 for codlin moth; 796 for immaturity; 8,423 for being too far advanced and over-ripe; 668 for black spot; and a further 3,267 for various other reasons, such as poor quality or discolored cases, newspaper lining, slack packing, wrong branding, cases broken at ship's side, bad grading, skin blemishes, San Jose and mussel scales; wrong variety mark, etc. There were also rejections at country centres.

In conclusion, I desire to point out that although I have stressed a number of faults with growers, with a view to bringing about a still further improvement in the grading, packing and general get-up of our fruit, it is only right for me to state that a large majority of Victorian Apple and Pear growers put their fruit up in a most desirable and attractive manner, but fortunately it is the few growers who do not do these things that helps to bring the name of the better class grower down to a lower level, hence everyone should assist to build up a good name.

In conclusion, Mr. Ward states that the foregoing faults have been stressed to bring further improvements for a large majority of growers pack attractively; the few growers who fail to do so brings the name of the better class grower to a lower level. Every one should assist in building up a good name.

MELBOURNE MARKETS.

Western Market to be Transferred to Victorian Market.

An announcement of first-rate importance is that it has been decided to transfer the Western Market to the Victoria Market.

This improvement has come about after years of negotiation. The wholesale fruit merchants at present occupying premises in and around the present Western Market site, will be accommodated in a site adjoining the present Victorian Markets.

It is estimated that immense savings will be effected for fruitgrowers, and the business will be more expeditiously handled.

Mr. F. W. Vear, well known in the fruit industry, summarised the new arrangements as the best Christmas box the growers have had for many years.

BAIRNSDALE.

Mr. W. P. Heath, of Messrs. Palmer & Co. Ltd., Bairnsdale, reports that a heavy crop is showing for Apples. Pears set well, but there is considerable dropping. Apricots—heavy.

Another illustration of "Wilson's Wonder" Walnut, over 2 inch. in length. Trees offered by John Brunning & Sons, Somerville, Vic.

Tasmania.

Fruit Crop Prospects ∴ Apple Estimate 3,500,000 Bushels

Tasmanian fruit crop prospects are given hereunder by Mr. P. H. Thomas, Chief Horticulturist, under date December 10.

Apples.

Later returns indicate the heavy settings which characterised nearly all varieties have been somewhat reduced during the last month.

Varieties.—Jonathan, Cleo., Sturmer, and Alfriston, are generally normal to heavy in most districts.

Ribston, King Pippin, Cox's, Granny Smith, Delicious, Crow's Egg, are good to medium.

French Crab, Scarlet, London Pippin, Dunns and Democrats almost invariably reported medium to light.

In the early part of the season frosts were experienced in most districts, particularly in the Tamar and Spreyton areas. Recent reports indicate that damage was not so great as anticipated.

Heavy hailstorms affected a large portion of the crops in the Bagdad district.

Owing to the wet and humid weather during November, black spot fungus made its appearance, particularly on unsprayed areas. The infection is especially noticeable on Cleo. and Sturmer.

Summarising the reports and percentage estimates received for the State, it would appear that—estimating the normal yield at 3,500,000—approximately a 95 per cent. crop should be harvested, viz.: 3,250,000 bushels.

Pears.

Crop 70 per cent., or 175,000 bushels.

The Pear crop will again be below normal. Very few districts report heavy settings and several varieties are consistently "light" throughout the State.

B. Bosc appears to show promise of good crops in the different centres followed by B. de Cap., Clairgeau and Packham's.

Varieties which should bear medium to good yields, are Easter Beurre, Williams, Gansells Bergamotte, Glou Morceau, and Kieffer.

Light crops are expected from Doyenne du Comice, Josephine de Malines, Giblins, W. Cole, and W. Nelis, the latter three being generally stated as a 25 per cent. crop in most districts.

Summarising the reports and percentage estimates received—a 70 per cent. crop should eventuate. Estimating the normal yield at 250,000 bushels, the present prospects are for approximately 175,000 bushles.

Apricots.

Apricots set heavily in all districts and thinning has been generally practised in order to produce canning quality. Heavy crops are expected despite recent gales.

Estimating the normal yield at 120,000 bushels, and summarising the reports received, the crop should be about 20 per cent. above normal, viz., 144,000 bushels.

Plums.

These, with the exception of Greengage variety, have generally set good crops, some of the Prune varieties being exceptionally heavy. It is not possible to obtain an estimate of this crop owing to the absence of reliable reports re percentages and yields.

Berry Fruits.

The November rains have considerably benefited the fruits, although injury is reported in some districts from the heavy gales that have been experienced. Reports indicate that with good weather during the next month and at the harvesting period, the crops should be generally satisfactory, particularly Strawberries, which are showing a very healthy development.

AUSTRALASIAN FRUIT EXHIBITION.

Hobart, May 7.

The Australasian Fruit Exhibition, which is to be held in Hobart in May, 1930, together with the 1930 session of the Australian Conference of Fruitgrowers, is arousing considerable interest.

The Secretary (Mr. A. J. Honey) announces that the prize fund is expected to reach £1,000.

At a meeting of the general committee, the Exhibition President (Hon. L. M. Shoobridge, M.L.C.), presiding, the schedule of prizes was decided on. This comprises about 275 classes in the fruit section, 60 classes in the farm and dairy section, and the competitions include the grading and packing of Apples.

During Exhibition Week, a grand diploma and ribbon will be offered for the best shop window display of fruit.

Kingston.

The principal fruits grown in the Kingston district are Apples, Pears, Plums, and berry fruits.

The coming crop prospects compare more than favorably with last season. Apples are above the average, Pears are lighter all round, Plums fairly heavy, and a good showing of small fruits.

Growers are planting mostly Apples, mainly extensions of present orchards. Tasma, Granny Smith, Sturmer, Crofton, Cleos., and Tasman's Pride are the principal varieties planted. The small-fruit growers are organising to ship Black Currants to the mainland markets in 12 lb. containers, where it is hoped a considerable quantity may be absorbed. The growers are faced with a serious position in disposing of their small fruits, owing to large stocks of pulp still on hand, processers are not disposed to purchase as much as usual.

The Port Huon Fruitgrowers' Association are extending their cool stores at Port Huon to accommodate over 100,000 cases for the forthcoming season. Taken all round, the season appears to be favorable so far.—B. J. Pearsall, 2/12/29.

DRIED APPLE INDUSTRY.

Tasmania's Enterprise.

THE Development and Migration Commission has issued a report dealing with their investigation of the dried Apple industry of Tasmania.

Of the total Australian output of dried Apples, which ranged from 890,854 lbs. in 1926-27 to 2,272,633 lbs. in 1927-28, Tasmania produced, on the average, about 80 per cent. Its output in 1927-28 was 1,409,980 lbs.

During 1927-28 Tasmania exported to Great Britain approximately 460,000 lbs., or 16,400 boxes, of dried Apples, the average price being 70/- c.i.f. London, corresponding to 60/-, or 6½d. per lb. f.o.b. Hobart.

The Australian market is highly profitable, and it is recommended that there be rigid grading as to quality and color and intense selling propaganda.

Other recommendations are for a committee to investigate de-hydration equipment, system of grades, amalgamating certain factories, and cooperation between grower and evaporater.

New South Wales

Crop Reports and District News

FRUIT crop estimates for N.S.W. for the 1929-30 season are to hand from Mr. C. G. Savage, Director of Fruit Culture for N.S.W., as follows:—

Citrus.

The season has developed into a very favorable one for blossoming. All citrus growing districts report a heavy bloom on Washington Navels, Valencia Late Oranges, and Emperor Mandarins, whilst in most districts Common Orange varieties and Lemons have bloomed from moderately to good.

At this time, though it is early to forecast a crop, every indication is for next season's crop being a record. The vitality of all trees is unusually good.

Harvesting of Valencia Oranges is proceeding, though in the aggregate the quantity is being rapidly reduced. Prices have weakened somewhat contrary to the quantity offering and available, but which is probably related to the continued changeable weather.

Lemons, on the other hand have firmed and as supplies for a few months will be light, must increase in price.

Stone Fruits.

Peaches.—On the Murrumbidgee Irrigation Area, where chiefly canning varieties are grown, the crop is heavy on the Leeton end of the area, but only fair on the Griffith end, this difference being chiefly due to failure in many places to control green aphis.

In the non-irrigated inland parts the setting was generally good, but will fail to size unless adequate rain falls within the next few weeks.

On the tablelands the crop is only light to fair.

Plums.—The crop inland on the tablelands is very light. On the coast, where chiefly Japanese Plums are grown, the crop is heavy.

Prunes.—Both on the Murrumbidgee Irrigation Area and in the Young district, Robe de Sergeant Prunes are very light, and d'Agen light.

Apricots.—On the Murrumbidgee Irrigation Area the crop is very heavy. Other inland parts the crop varies from light to fair, and is also light on the tablelands.

Cherries.—In the Young district a very heavy crop set, but this was reduced to a fair crop by the continued dry weather. The very early varieties harvested towards the end of this month were very small.

In the Orange district the crop is heavy, but a soaking rain is needed at once to bring the fruit up to normal size. In the Goulburn and Armidale-Uralla districts the crop is light.

Pome Fruits.

The early indications of an exceptionally heavy crop of Apples and Pears have to some extent been changed, through the cold snaps towards the end of October. However, though some individual growers have suffered severe losses, the losses are not general, and will not very materially effect the total yields from the main Apple and Pear producing districts of the State. A heavy crop of Apples is still anticipated.

Granny Smith Apples promise to be strikingly heavy. Jonathan and Delicious not so heavy, and Dunn's will be light.

The indications on the Northern tablelands are for a lighter crop than in the south and west. The early Apples grown on the coast are light, but these cannot be classified with the later and sounder Apples grown inland on the tablelands and do not affect the real Apple position.

The Pear crop generally does not promise to be as heavy as the Apple crop.

FRUIT MARKETING COMMITTEE.

Educating the Public in the Health Values of Fruit.

Reduction of Barrow Licenses Opposed.

(By Our Correspondent.)

THE Fruit Marketing Committee, originally known as the Fruit Glut Committee, continues to function satisfactorily, and holds meetings at monthly intervals. The use of the word "glut" has for some time been taboo in this State, and our Fruitgrowers' Federation took early steps to remove it from official notices. It was held that publicity given to an oversupply of fruits induced the consuming public to purchase because it was cheap. This, of course, is contrary to the interests of the industry, especially when scarcity of supplies brought prices up to levels which led the public to believe they were being exploited. It also falsely educated the public as to the necessities for fruit as a food rather than something to be had cheaply because the grower was down on his luck.

Many of our men are now taking exception to the slogan, "Help the Fruitgrower," and quite rightly too. This is another line of false education. No one buys fruit—or rather, should buy it—to help anybody excepting himself and his family, and that because of the actual necessity for fruit as an article of diet. Every possible step is now being taken to impress upon the people the food and medicinal properties of various fruits, and in this respect the Government and Civic Health authorities are giving magnificent help.

At the last meeting of the Committee, a report was received regarding a test made on children who were below standard. This was carried out by the principal medical officer of the Department of Education. Two Oranges a day were given to 80 children, who were weighed and measured weekly, and medically examined, both before and after the test. The result revealed, amongst other things, that 19 out of 20 children who were suffering from anaemia, showed marked improvement. In three of these cases the anaemia was most marked, and the improvement noted accordingly greater.

As this Committee is comprised of growers, agents, merchants and consumers, the matters dealt with cover all aspects, and much benefit is gained thereby. All sections are agreed that there must be no further reduction in barrow licenses, as by this means many thousands of cases of fruit which must be sold quickly, are disposed of.

CHERRY TREE STOCKS.

Depth of Rooting in Relation to Drought.

The past season's drought has been responsible for a remarkable change of mind on the part of a number of orchardists, particularly Cherry-growers, in the Young district, writes the Orchard Inspector for this part of N.S.W. in current notes.

"Many who keenly advocated planting Mazzard stocks in order to obtain large trees are now just as keenly advocating the use of the smaller-growing Kentish stock. The change has been brought about as follows. Many varieties of Cherries on Mazzard stocks died right out last season, hundreds more are at present in a bad way, while, in addition, it has been found necessary to remove thousands of dead limbs.

"The varieties which suffered most were Early Purple Guigne, Werders, Early Rivers, Eagle's Seedling, and Florence. In two orchards in the Young district several rows of Florence on Mazzard stocks have died out completely, while an adjacent row of St. Margaret's on Kentish stocks is quite all right.

"It has puzzled many how the Kentish, which is a shallow-rooted stock, can stand up to the dry weather conditions better than the well-rooted Mazzard. This season's observations point to the following being the explanation. The Kentish are surface rooters and therefore benefit by light summer rains, while the deeper-rooted Mazzard receives no benefits from such falls; as a matter of fact, if the rainfall is very limited the Mazzard perishes. This is what happened last season.

"At present the subsoil in the Young district is 'bone dry,' the recent rains only penetrating from 10 to 15 inches. Should these conditions continue, very heavy losses will result to Cherry trees on Mazzard stock next season."

'Ware Cherry Slug.

Growers are incidentally reminded to keep a sharp look-out for the Cherry tree slug, and if it should appear, to spray the trees with lead arsenate before it becomes too numerous. Sometimes it will be found that two or three applications of spray are necessary in order to get the pest under control. Should it first appear on the trees a few days before the fruit is ready to pick, as it often does, the spraying, of course, must be delayed until after the fruit is harvested.

GREETINGS ACKNOWLEDGED.

The Editor acknowledges hearty greetings from the Empire Marketing Board, also a series of postcards which illustrate the various posters put out by the Board. Generally, the design of the posters is to create general Empire sentiment, which forms a background for specific advertising by the various Dominions.

The Editor acknowledges with pleasure a card of greeting and good wishes from the Committee of Direction of Fruit Marketing, Brisbane; the Hon. L. M. Shoobridge and Mrs. Shoobridge, "Sunnyside," Tasmania; Mr. Lee C. Solomon, Destruxol Corporation, Sydney.

New South Wales.

News and Notes.

(By Our Correspondent.)

THE MOST IMPORTANT move undertaken by the Fruitgrowers' Federation for a long time is that of opening a sales depot for fruit which is either superfluous on the market or will not safely hold over the week-ends. The depot opened on Friday, December 13, and immediately became the centre of activity, as judicious press notices had previously announced the feature for several days.

At present, a huge **Oversupply of Apricots** is being dealt with, and these are selling very rapidly, not only at the depot, but also per usual trade mediums.

Unquestionably this is a progressive move, and one which will do more than anything to bring growers to know what the Federation can and will do in time of emergency.

On the first day the supplies were naturally limited, but this was quickly overcome as trade possibilities revealed themselves, and now that all preliminary difficulties have been overcome, a very respectable turnover may in future be anticipated.

SULTANAS AND NUTS IN CARTONS of ¼ lb. and retailing at 6d. by the Railway Refreshment Rooms, has proved another wonderful success for co-operation. Since the sales started late in November last the daily average disposed of is 6,000. They are enclosed in a hygienic dustproof container, and feature Sultanas instead of the thicker-skinned and heavily seeded Raisin. This department is now undertaking a continuity of fruit supplies, and may be regarded as the principal outlet for fruits which are packed co-operatively in N.S.W. Recently **400,000 lb. packets of Prunes** were disposed of—every carton of which gave full and complete satisfaction.

Just at present, thousands of pounds of Cherries are daily being disposed of, and these will be followed by enormous supplies of Grapes, which will cover the period of mid-January to May.

The districts of Griffith, Yenda, Yanco, Orange, Young, Gosford, and Batlow have all in turn benefited by the retail activities of the Railway Department, and it is hoped that still further extensions will be made by way of pure Orange drinks, such as is done in Victoria.

Every effort is now being made to encourage the management to instal batteries of Sunkist extractors, so that the heavy second crop of Oranges will meet with an automatic demand. The profits in this summer drinks are enticing, and there seems little reason to doubt ultimate success in this endeavor.

Sulphur in Dried Fruit.

APPROVAL has at last been given for an increase in the amount of sulphur dioxide in dried fruit. The limit of seven grains per lb. has for many years ruled in N.S.W., but now the Pure Food Advisory Committee has approved that not more than 14 grains or sulphites calculated as sulphur dioxides shall be used. This decision now brings N.S.W. into line with the regulations in force in Great Britain and Victoria, and thus permits growers in ordinary orchard practice to produce the light-colored dried article demanded by the public.

The Health Department has agreed to amend the Act accordingly, and it is hoped that the same decision will be made in all States, so that a uniform limit will be in force throughout the Commonwealth. It should be noted that the N.S.W. Housewives' Association are much against the use of sulphur dioxide in any shape or form, and whilst objections may reasonably be made when it is used with other food commodities, there does not exist the same reasons in this instance. It should not be difficult to counter all objections which are not substantial, and it is quite possible that lengthy delays might easily be avoided were action taken to dissipate erroneous opposition. The public is daily becoming educated in fruit as well as other food matters, and the industry is worthy of protection. Only now is the advantage of fruit publicity becoming sufficiently realised.

Coloring Oranges.

ETHELYNE GAS is coming more into use here, and this includes a general improvement in the appearance of the second crop Oranges now being marketed. It is said of this gas that immature fruits will not benefit by treatment, and if this is so the general use can be advocated. To the present the leaders of large citrus marketing operations have been somewhat afraid to encourage this process, for the very reason that artificial coloring has too many dangerous possibilities.

There is no doubt that color in Oranges can be brought to a high degree of perfection, and this is most advisable, especially with those types which lose in appearance whilst hanging. With early navels, many of which are perfectly sweet whilst just turning from the green, the use should be well above comment, but if by any chance whatever all and sundry may at little expense flood the market with unripe fruit, the position will be serious. It is, of course, well known that certain juice and sugar contents must be complied with, but in practice not one case in a million is so tested and with all alike in appearance of maturity, it would be quite impossible to supervise consignments or even check them over until disappointed consumers raised their complaints.

N.S.W. FRUITGROWERS' FEDERATION.

A MEETING of the Board of the N.S.W. Fruitgrowers' Federation was held at Sydney on December 6, Gen. J. Heane presiding. There were also present Messrs. H. G. Such (Griffith), F. Helson (Leeton), A. E. Herring (Batlow), L. C. Willis (Kelso), W. E. Kirkness (Gosford), R. Hill (Narara), A. F. Dunstan (Sackville), J. Neil (Glenorie), W. W. Challis (Kentucky), A. J. Taylor (Singleton), P. C. Macdermott (Market Representative), and E. E. Herrod (Secretary).

The Secretary reported on several matters as follows:—

Dried Fruits Preservatives. — Increase of sulphur dioxide from 7 grains to 14 grains to the lb. permitted.

Citrus Import Prohibition.—Request for prohibition being favorably considered by new Federal Government.

Citrus Grading Regulations.—Federal Citrus Council recommended an alteration of the blemished area of "standard" from 1 inch to 1¼ inches.

Health Week.—Pamphlet including Dr. Purdy's article widely distributed. A cinematograph display of fruit propaganda was given for a week.

Farm Produce Agents Act.—Though in receipt of urgent requests, the Minister could not promise the amending Bill would be introduced this session. In the proposed amendments the bond is increased to £2,000 for companies or partnerships, and £1,000 for individual trader; also agents trading as merchants to be registered.

Orchard Competition.—Conditions were being drafted governing the prize by the Royal Agricultural Society for best 5-acre block of citrus.

Orchard Registration Fees.—Clerks of Petty Sessions permitted to accept cheques from growers in payment of orchard registration fees.

By-products.—Tasmanian Department sent circular on cider-making. Decided to request Mr. H. Broadfoot visit U.S.A. after accompanying shipment of Apples to Hull.

Market Representative.—The President reported having appointed Mr. Macdermott to the position of Market Representative.

Sales Depot.—The Market Representative submitted a report proposing to establish a depot on Fridays and Saturdays for fruit which would be unsaleable the following Monday.

Agents' Agreements. — A draft agreement was finalised for submission to proposed accredited agents.

Duty on Imported Shooks.—The Secretary reported having lodged a protest to the Federal Government against the increased duty on fruit case timber imported in shooks.

Markets Overseas.—Mr. Blick's report on his visit to overseas markets was received, and the Secretary was instructed to prepare a synopsis for circulation.

Duty on Prunes and Dates.—Attention was called to the increase of duty on imported Prunes to 6d. per lb. and 2d. per lb. on Dates.

Fire Blight.—With reference to the flowering Cherry trees offered to the Commonwealth by Prince Takamatsu of Japan, the Secretary reported the proferred gift had been withdrawn in view of the danger of the introduction of fire blight.

Sprays and Dusting.—The Department of Agriculture wrote, stating that it is only under exceptional circumstances that dust treatment is considered to be preferable to spraying, but a further report will be forwarded when the results of the experiments are available.

Codlin Moth.—It was decided to request that districts which can satisfactorily control the pest without bandaging be exempted from the compulsory bandaging clause subject to the discretion of the local fruit inspector.

The N.S.W. Fruitgrowers' Federation is actively supporting the campaign for the use of the railways in preference to motors.

Walnuts.—Mr. James Slater, who handles the bulk of Walnuts for N.S.W.—principally grown in the Bright district of Victoria—considers this nut to be the equal of, if not superior to, any imported. The greatest competition comes from Italy. Surely local interests are large enough to protect by efficient organisation.

Mr. J. W. Blick, of the Producers' Distributing Society, has recently returned from a world tour, and has presented an interesting report.

NEW SOUTH WALES DRIED FRUITS BOARD.

A meeting of the N.S.W. Dried Fruits Board was held early in November.

Publicity.—With an allocation of £265, the Board proposes to conduct an intensive "Dried Vine Fruits Cookery Fortnight" in 100 Domestic Economy Colleges, attended by some 20,000 pupils. Schools are being supplied with a cookery book, and sufficient dried fruits for demonstration purposes. Thus to train the coming generation in the use of dried vine fruits.

Murray River Border Vineyards.—As 1,068 tons of vine dried fruits produced on the New South Wales side of the Murray were processed to Victorian packing sheds, growers resented the official necessity for taking out owners' licenses to transfer the fruit from New South Wales to Victoria. The Board was sympathetic towards the growers, and decided to refer the matter to the Interstate Conference to be held on February 10.

Tenure of Elected Members.—As the three years' tenure of elected members was deemed to be more workable than the present tenure of two years, it was decided to refer this matter to the Minister for an amendment of the Act. The next election takes place on February 3, 1930.

Export Control Board.—In reply to the request of the Board for separate representation for New South Wales from the Commonwealth Dried Fruits Export Control Board, the Minister for Markets reply stated that unless it could be shown that the interests of the dried fruits industry in N.S.W. were being prejudiced under existing conditions, it was not deemed to be advisable to amend the Act.

Members considered it was prejudicial to New South Wales, and decided to write to local associations for an expression of their ideas.

A letter from the Curlwaa branch of the A.D.F.A., requesting that a uniform quota be fixed for the 1930 vine dried fruit crops, was referred to the new Board to be elected on February 3.

Requests from Leeton.—The Leeton branch of the N.S.W. Fruitgrowers' Federation wrote, requesting (1) that the export quota for New South Wales Sultanas be fixed at not more than 50 per cent.

(2) A protest entered against the action of the Commonwealth in discriminating against N.S.W. by its regulations restricting interstate trade, was that full export levy is being paid by New South Wales growers on the same basis as other States.

(3) That separate representation on the Commonwealth Dried Fruits Export Control Board be asked for.

(4) That the Government be requested to provide financial support to growers who suffered by the serious frost on October 22.

(5) That the Commonwealth Government exclude from Australia foreign dried fruits.

It was decided that the fixing of the 1930 export quotas be left for the incoming Board.

The provisions of the State and Commonwealth dried fruit Acts were explained, showing that where the Commonwealth had determined that the export quota for Sultanas was 90 per cent., this automatically included N.S.W. A person in N.S.W., whilst at liberty to trade within the State and export only 50 per cent. of Sultanas must, if he desires to trade interstate, export 90 per cent.

The Minister for Markets had been requested to fix a sliding scale for export quotas, according to quantities produced in the various States—and consequently a small quota for N.S.W., but this the Minister had declined to do.

It was decided to enquire into other matters.

N.S.W. Apples for Hull.

A Record Shipment Organised.

As a result of the steady organising which has been proceeding since May last, a complete lower hold (capacity 27,500 cases) in the Commonwealth and Dominion Line motor vessel "Port Bowen," loading about the 2nd and sailing about the 8th April, 1930, has been booked by the Batlow Packing House and Cool Stores Co-operative Society Ltd.

This constitutes a record for N.S.W., for the first time in the history of the fruitgrowing industry a complete lower refrigerator hold will be loaded and sealed for an overseas port.

Further, the whole of the fruit is to be pre-cooled before stowage. Mr. Broadfoot, the special fruit instructor, Department of Agriculture, N.S.W., sails on the same vessel, and through the courtesy of the chief engineer will be enabled to note the readings of the thermometers and to study the marketing conditions on the other side. In this way, information will be gathered which will prove of great value to the growers not only of this State, but also to Australasia as a whole.

This lower hold will be stowed with different varieties of Apples, and it is anticipated that by holding over the shipment until April the later maturing Apple, such as Rome Beauty, can then be included.

Pears also may be available for export, and with this object in view an option has been secured over two small chambers with a capacity up to 3,000 cases.

Good carrying Pears only will be contemplated; these, of course, will also have to be pre-cooled.

N.S.W. growers who have not already made their arrangements to participate in this co-operative shipment should get in touch with Batlow Cool Stores, without delay, otherwise there is a strong risk of missing this valuable opportunity.

Batlow growers are the strongest supporters of the movement, and are shipping in the region of 10,000 cases of Apples and possibly 1,000 to 2,000 cases of Pears.

Pre-Cooling Peaches and Soft Fruit

Activity in Victoria and New South Wales.

THE value of the new method of pre-cooling Peaches is to be seen from the fact that the Goulburn Valley normally sends 250,000 cases of Peaches to Sydney in a season. Previously there was a loss of around 2/6 per case because of the fruit going bad. This meant a loss of £30,000 to the growers. In addition to this loss, much of the fruit was sold to second and third class buyers, only a small proportion being suitable for the first class trade, so the loss has been probably nearer to double the sum just mentioned.

For three years experiments have been carried out by Mr. S. Fish, M., Ag.Sc., who, on behalf of the Victorian Department of Agriculture, conducted some useful investigations in co-operation with the various growers' associations and their Sydney representative, Mr. D. G. Wills.

A series of convincing experiments was carried out recently, when 45 refrigerated T. trucks were used at varying periods. Tests were made as follows:—

Consignments of Peaches from the same orchard were taken, portion being pre-cooled and sent in refrigerated trucks, the other portion of the consignment going in iron trucks in the same way as has been the practice for years past. The fruit in the iron trucks arrived in a deteriorated condition; the pre-cooled fruit in the refrigerated trucks brought an average of 8/- per case higher than that sent under the old method. Furthermore, under the refrigerated system, there has been a notable absence of transit rot.

The sending of the pre-cooled fruit in the 45 refrigerated T. trucks under control conditions was very convincing to growers. Mr. Fish visited Sydney on several occasions to make scientific investigations. There is no doubt in the minds of officers of the Agricultural Department that the pre-cooling of Peaches for interstate trade is a matter of the very greatest importance to the industry.

Negotiations are proceeding for utilising the buildings of the former Shepparton freezing works for storing and pre-cooling fruit which has to be sent long distances by rail.

At a meeting of Shepparton Irrigators' Association the President, Mr. J. McDonald, said that in no circumstances were growers to remove their fruit from cool storage till it had been at least 48 hours in cold store. The total cost of taking the fruit into the cooling chambers, providing the right temperature and loading into the railway trucks, was not expected to be 3½d. per case.

* * *

The possibilities awaiting growers in the pre-cooling of soft fruits formed the subject of comments by Messrs. R. Werner & Co. Pty. Ltd. several years ago, when an article was published in the "Fruit World" suggesting that by the use of cold storage, canneries could extend the canning period and so keep down the size of the canning plant, reduce overtime, thus helping with the industrial problem, as well as the fruit itself.

It was then stated that cannery managers could trace many advantages to the cool store, one of which is now found in the pre-cooling of Peaches, especially for interstate markets.

In N.S.W. two live co-operative companies have made a move in the pre-cooling business. Yenda Producers have a plant installed and running, and the Griffith people have a similar plant in course of construction. It is understood that soft and citrus fruits and Grapes will be handled, and it will be interesting to hear of the results. Growers in soft fruit districts seeking outlets further afield for their produce would do well to consider, either individually or collectively, the advantage of pre-cooling and storage with small ice-making equipment where no ice supply is available, In fact, the entire running expenses and perhaps a few pounds extra could be made out of ice supply for the district. At least three months should be allowed to build and equip any sort of cool storage plant, which means that parties interested should make enquiries in June or July to give plenty of time for plans and estimates to be obtained.

R. Werner & Co. Pty. Ltd., of 86 Burnley-street, Richmond, whose advertisement appears on page — of this issue, will be pleased to prepare preliminary plans and estimates for any sort of pre-cooling, cool storage, or ice-making proposition.

Messrs. Werner & Co. also state that great advantages would accrue to Apple exporters by the pre-cooling of fruit before shipment, and stores could be erected in convenient positions. The firm states that, while not a panacea for all the troubles, there is no doubt that pre-cooling, plus prompt and careful handling right into the ship's hold will assure the exporter that his fruit at least starts off on its journey in a fit condition. This leaves the ship with the task of holding it down only, and the fact that first-class shipments are frequently made proves that under good conditions in the ship's hold, that first-class shipments can always be made.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative
Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle
Etc.

South Australia.

THE SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the executive of the South Australian Fruit Marketing Association was held at Adelaide on December 2. There was a large attendance.

Fruit Packing.—The Minister of Agriculture wrote, stating he was endeavoring to arrange for Mr. B. Krone, Victorian Fruit Expert, to visit Adelaide in January for the purpose of holding instructional classes in the "cheek" method of packing Apples.

The chairman said that he was obtaining an expert packer from Victoria who would conduct a packing school at the New Market, and subject to certain conditions, all growers could obtain instruction at this school.

Pear Shipment.—Reports were received that 2,000 to 3,000 cases of "Duchess" Pears would be available for the first shipment, and at least 10,000 half-cases for the second shipment. It was decided to make further inquiries in regard to freight.

Membership. — 34 new members were elected.

Export of Immature Fruit.—It was resolved to write to the Minister of Markets and Transport, Canberra, strongly protesting against the export of immature fruit, and stressing the damage done to the export industry in the past by immature fruit having been placed on the oversea markets.

It had already been decided by this Association that the first shipment of fruit from South Australia would not be before February 27, 1930.

It was decided to write to the Oversea Shipping Representatives' Association, asking for the dates of arrival at destination of the vessels which would carry Apples for the 1930 season, and also whether sufficient space had been allotted to lift the 400,000 cases which it was estimated would be available for export.

Levy.—The question of fixing the amount of levy for the coming season was discussed, but as the Association rules provide that the amount of levy for the season ending June 30, 1930, shall not exceed £400, it was decided to defer the matter until more definite figures were available.

Grape Crop Prospects.

Mr. George Quinn, South Australian Chief Horticultural Instructor, advises under date December 27:—In the Murray Valley areas, the estimates of Grape crops may be stated as follows:—

Currants.—Good, probably better than last year.

Sultanas.—Fair to good—not so heavy as last season, but quite up to average.

Muscats (Gordos).—Good.

Waltham Cross (Valencias).—Fair.

Doradillos.—Fair to good.

Other Wine Grapes.—Fair.

Mr. C. H. Ragless, of Eden, S.A., reports on December 10:—

The principal fruits grown hereabouts are Almonds, Grapes (wine), a few Apricots, and Peaches.

Crop Prospects.—Almonds very short—less than half last year's crop; Grapes promise better than last year. Grenache and Doradilla especially; Apricots and Peaches, on the short side, quality good.

There are no fresh developments, rather, the industry is going back locally, many orchards going out of cultivation, having been sold for closer settlement, roads cut through them, trees not pruned (except by cattle).

SUCCESSFUL CO-OPERATION IN SOUTH AUSTRALIA.

Berri Packing Union's Report.

At the annual meeting of the Berri Co-operative Packing Union, the Chairman, Mr. M. Nicholas, reported the successful operations during the year; 3,125 tons of vine fruits and 238 tons of tree fruits were handled, both being records.

In the merchandise department the enlarged turnover had enabled the directors to give the members greater rebates. A surplus of £11,648 had been distributed to members.

Citrus Packing.—The Chairman said that the Union's operations were gradually growing and the installation of an up-to-date citrus plant was coming up for consideration.

SOUTH AUSTRALIA.

Renmark.

The principal fruits grown here are Sultanas, Zante Currants, Gordos, Doradillos, Apricots, Oranges and Pears, with a fair quantity of Peaches, Nectarines and Olives.

The prospects for the coming season are fair, but not quite so heavy as last year, this applies to vine fruits. Apricots are considerably lighter, it is rather early to estimate for Oranges and Pears, but up to date they appear good.

With regard to developments, there are no new plantings going on to any extent, of course there are always little bits being done, but Sultana planting is now being discouraged. Nothing new in the way of cool stores or packing sheds is going on.

The recent locking of the river has been a great convenience, and has cheapened the irrigation service to the growers.

Organisation among the growers is proceeding steadily.

The weather is keeping very dry, we not having had our normal rains for three years, of course this does not affect us to a very great extent in the irrigation area, but we like to get a good rain occasionally for domestic and gardening purposes, the irrigations not being frequent enough for the latter.—H. McCarthy, Renmark, 26/11/29.

McLaren Flat.

The principal fruits hereabouts are wine Grapes, Currants, Prunes, Apples, Apricots, a few Pears and Peaches.

Crop Prospects.—Wine Grapes, Currants, Prunes, Apples, good; Apricots, light.

Three packing sheds are operating locally, and several wine cellars.

Cudlee Creek.

Mr. Dudley W. Hannaford, Secretary, Cudlee Creek Co-op. Society Ltd., writes under date December 5:—

The principal fruits grown in this district are Apples, Pears and Plums.

Principal varieties:—**Apples:** Cleos., Dunn's, Jonathan, Rome Beauty, Tasmas, Democrat, Statesman, Glengyle Red, and Stone Pippins.

Pears: Duchess, Packhams, Josephine, Howells.

The coming prospects are good, with the exception of a few orchards that were badly cut with hail early last week.

Last year was very short crop, and I should say we will have approximately six times more fruit this coming season.

The Cudlee Creek branch of the S.A. Orchardists' Association have sold 40,000 cases for overseas shipment.

Wirrabara.

The principal fruits grown in this district are:—Apples, Peaches, Plums (Jap. and European), Apricots, Pears, table Grapes, and, to a limited extent, Currants for drying.

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Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.
Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia.
Murdoch Bros., and A. J. Walshe & Co., Hobart, Tasmania.

This year's prospects for Apples, heavy; Pears, heavy; Apricots, light; Peaches, heavy; Plums, both types, medium; Grape vines are flowering well.

Last year:—Apples, none; Apricots, heavy; Peaches, heavy; Plums, ditto; Pears, light. The Grape crop was heavy, excepting Currants, which were very light. A six months drought last fruit season caused much small fruit in outlying districts. Many Currant bunches were too small to pick.

Rain Needed.

There are no new developments to report. Four long dry summers in succession have helped to retard progress. As the drought in the north of the State shows little likelihood of breaking at present, there will be no new planting until the wet cycle of years returns. This cannot now be too far off. In the pastoral country further north, the drought has lasted six years. Water supplies all over the fruit-growing part of this district have, in some cases, failed, and in others are so depleted that some vegetable growers, particularly Tomato growers, have had to restrict their planting this summer.

In addition, the failure of the Beetaloo Reservoir, in this locality to replenish its supplies during last winter, is causing grave anxiety in Port Pirie, the great smelting town, and our principal market. The town depends on Beetaloo for its supplies. The closing of even a section of the plant means a serious loss to fruit growers, owing to a restricted market. Broken Hill has been practically lost to Wirrabara as a market, through the completion of the Sydney railway. This was years ago our best market; many thousands of cases of fruit being despatched thereto in good seasons.—Percival J. Curnow, 22/11/29.

Cultivating Machine.

"**Auto-culto**" **Machine.**—Successful demonstrations with the Auto-culto machine have recently been given. The Auto-culto is designed for cultivation, harrowing, furrowing, etc., and is stated to be specially suitable for the man who has not sufficient work to keep a horse occupied all the year.

At the recent demonstrations, market gardeners, nurserymen, poultrymen, and others expressed satisfaction. The tools which can be used with the Auto-culto include:—Hillers, hoes, flat sweeps, half sweeps, beet hoes, furrowers, steel points, ploughs, etc.

The simplicity of control was demonstrated when several of the onlookers handled the machine with ease. The total weight of the machine is 2 cwt.; it is 2 ft. 8 in. in height to the top of the tank. The normal width is 20 inches, but it is adjustable to take through road wheels. Further particulars are obtainable from Messrs. Donohoe & Thompson, 361 Little Bourke-street, Melbourne.

Insect Pest Control

Summer work in pest control includes spraying citrus trees with oils and fumigating with hydrocyanic acid gas to kill scales. Continue with arsenate of lead on deciduous trees.

Promising results are being obtained with the use of white summer spraying oils to kill the codlin eggs, and generally to control aphis, red spider, harlequin bugs and other orchard pests. Continue with nicotine or white oils for aphides and scales.

Fumigation.

Fumigation with hydrocyanic acid gas kills red scale of Orange and various other scales and pests. In Victoria fumigation is compulsory. Tents are placed over trees, calcium cyanide dust, 1 oz. per 100 cubic feet, is forced in by means of a hose and blower. On being released to the air hydrocyanic acid gas is formed. This has largely superseded the "pot" method of mixing cyanide, sulphuric acid and water.

Fumigation is done (on still nights) from late December to early June; the temperature should not be below 50 deg. Fah., and humidity should not exceed 80 degrees.

TRAPPING CODLIN MOTHS.

MANY growers are finding it of advantage to have codlin moth traps in trees, not only for getting rid of such moths as may be caught, but also to get an accurate indication as to the time the moths are active. Small jars containing 10 per cent. solution of vinegar, or 25 per cent. fermented Apple juice should be hung in the upper portion of the trees. Vinegar solution is only effective for the first brood, up to about Christmas. Fermented Apple juice is effective throughout the season and also attracts the light brown Apple moth. A jar to every second tree should be sufficient.

Use glass, or earthenware jars, not tins, as tin causes the liquid to become black and reduces its efficiency.

Red Mite, Bryobia, Etc.

If mites are present on the leaves in summer, spray with nicotine solution of white oil.

Harlequin Bugs.

These pests are very active just now. Spray with nicotine solutions, benzole or benzine emulsion, or white oil whenever observed.

CONTROL OF RED MITE ON APPLE TREES.

Mr. G. Stratford, orchard Instructor, Motueka, reports that tests carried out with summer spraying oil during last season were very successful in the control of red mite. He remarks: "Spraying was done the first week in February at strength 1-100, the result being a good kill, with practically no spotting of the fruit. A later spray on Delicious cleaned the trees well, there being no necessity to clean the fruit when grading for export. From these results I am prepared to recommend two sprayings this season—one towards the end of January, and another towards the end of February."—"N.Z. Journal of Agriculture."

CONTROL OF PESTS IN THE ORCHARD.

Vine Scale.

The young of this destructive scale are now emerging. It is advisable to spray at once with nicotine sulphate of black-leaf 40.

Pear and Cherry Slug.

The greenish slimy-looking larvae of this insect are still to be found in fair numbers or Cherry and Plum leaves. Dust lime, soot or dry sand on leaves or spray with arsenate of lead.

Codlin Moth.

Put bands on trees. Continue spraying with light oils. Examine bands every few weeks and destroy larvae. Remove loose bark from trees. For further information see "The Fruit World," November, 1929.

Apple Root Borer.

The perfect beetles of this insect are still to be observed on Apple trees. It is advisable to spray with arsenate of lead, 1 in 25. Shaking the tree gently so as not to cause fruit to fall, will cause borers to drop. It is advisable to spread a sheet under tree when doing this. Pick up and destroy beetles.

Aphelinus.

Woolly Aphis Parasite.

Continue putting out these parasites, which are doing excellent work in the orchards. Experiments are being carried out by the Science Branch of the Department of Agri-

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culture, Burnley, with this parasite, to try to control Peach aphids.

Light Brown Apple Moth.

Orange Aphids.

Bryobia Mite and Red Spider.

Black Cherry Aphids.

See "The Fruit World," December 1, 1929.

Scale Insects Hatching.

The young of Apple mussel, San Jose, red, olive or black, and other scab insects are now hatching. Spray with nicotine sulphate or light oils.

FRUIT FLY IN QUEENSLAND.

Menace of Pest in Home Gardens.

Mr. J. E. Franklin, Edward-street, Warwick, Queensland, writes as follows:—

"The fruit fly is our worst enemy. I consider it needs more drastic regulations to combat this pest. Every year I lose all my late Apples through them. In Warwick it is impossible to grow Tomatoes after new year—that is, after the fruit has ripened and rotted in most cases, and bred millions of fruit flies. As you know, most town gardens have a few fruit trees, but generally town people are not interested in the fruit fly; all they know is their fruit is full of maggots, and no good to eat, so they leave it to fall to the ground, consequently breeding millions of fruit flies. When they have no more fruit to sting, they turn to the Tomatoes, and my belief is they swarm together and migrate to the Stanthorpe district, as this district is almost free from fruit fly until about February, and then they appear in swarms. I have caught thousands, but still they get all the late fruit in our district (Poizieres). After March there is not a fruit fly to be seen in Warwick, therefore I consider the lower and warmer districts around Stanthorpe are the breeding grounds for them, and that they migrate to Stanthorpe towards the end of the season. Nothing is being done to prevent this."

SHORT CUT TO HEAVEN.

A doctor is superintendent of the Sunday school. He asked one of the boys this question—"Willie, will you tell me what we must do in order to get to heaven?"

Said Willie: "We must die."

"Very true," replied the doctor, "but tell me what we must do before we die?"

"We must get sick," said Willie, "and send for you."

Horticultural Research

Problems Awaiting Solution.

At a recent Fruit Growers Conference Mr. F. Thomas M.A. of Bunyip urged the establishment of a Horticultural Research Station in Gippsland, Victoria.

Continuing, Mr. Thomas stated:

"We expect great things from the Bureau of Science and Industry, and our own Experimental Orchard would be linked to it, but climatic and soil conditions affect results so vitally that the orchard must be where it is most needed. A good case can be made out for Gippsland, where so many miles of suitable country of similar character are still available for settlement.

"It was sometimes said that the scientist spent his time on matters that were of no practical value, but the work done in England at Rothamstead, at Long Ashton, near Bristol, and at East Malling, in Kent, show what might be done in Victoria.

"YARRA"
BRAND
SPRAYS

PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street
155 Yarra Street } Abbotsford, Vic.
Tasmanian Agents—
N. L. HOPKINS, HOBART

"Of Rothamstead it is hardly necessary to speak. We all know something of the valuable work being done there. Suffice it to say that an exhaustive search is now being made over a very wide range of substances in an effort to find cheaper and more effective insecticides than those now used. At East Malling experts have carried out a systematic study of the various types of Paradise stocks; grown true varieties, and can guarantee trees of particular and definite types.

"At Long Ashton, laboratory work has been done in finding the essential foods of fruit trees by pot experiments, and at East Malling this work has been tested in field trials. With Apples the aim has been to find the best time to manure the trees, and the effect of withholding one of the essential foods. The orchard is now beginning to bear, and information of great interest should soon be available.

"Much practical work in spraying has been carried out at each of these stations. Some of the problems attacked are as follows:—

1. A search for a cheaper and more effective insecticide.
2. The use of calcium caseinate to keep lead in suspension.
3. The exact effect of combining lead and lime-sulphur.
4. The best way to make an effective oil emulsion.
5. A chemical investigation of lime-sulphur leading up to a discussion as to whether it should be sold under a guarantee.
6. A study of the action of lime-sulphur in destroying the spores of fungi.

Our own problems, continued Mr. Thomas, were much the same. We needed an investigation of the soils in all orchard areas. We ought to know what was the ideal orchard soil, and what cultural or manurial operations would enable us to approximate to it. There should be also an intensive study of the problem of soil acidity, especially in Gippsland. The whole matter of the **manuring of fruit trees** needs long-continued and expert study. At present it was wrapped in obscurity. No definite guidance could be obtained on the matter, and it was quite possible that growers were throwing money away by the present haphazard methods of manuring.

THE VEITCHBERRY.

A new berry of merit has been brought out by Laxtons, of England, known as the Veitchberry, in compliment to Sir Harry Veitch, a world famous horticulturist.

It is a cross between the Abundance Raspberry and a Blackberry, and is said to be twice the size of an ordinary Blackberry or Raspberry, and of the color of a well-ripened Mulberry. The flavor is sweet and delicious, having that of both parents combined. It is self-fertile and a strong grower and seems to be generally satisfactory where tried in England.

Editorial Chats

Fruit Pies.

Considerable interest was aroused through an article in the October "Fruit World" advocating the use of fruit pies to help in the disposal of our surplus fruit crops.

Quite a considerable measure of success has followed the activities of the Australian Dried Fruit Association in pushing the sale of Raisin pies. We wish, however, that pies could be made which advertise themselves.

As sold at present, one only sees the crust, there being no indication as to the contents of the pie.

The pies which have such just popularity in America are cut in segments in much the same way as a circular cake is cut.

Certain advertising has been done here, as, for instance, the illustration in caterers' windows—"Have you had your Rasin Pie To-day?"

This is quite good, but the advertising would be wonderfully reinforced if the type of fruit pie could be altered, enabling the public to see the contents.

The same applies to Apple pies and fruit pies generally. We publish hereunder the views of Miss Agnes Mitchell, who is in charge of the Domestic Science branch of the High School, Castlemaine. It is quite practical, states Miss Mitchell, for fruit pies to be made in the style we advocate, i.e., for the pies to be cut in triangular segments.

This subject of fruit pies should be taken up with enthusiasm, when beneficial results would accrue.

AN EXPERT'S ADVICE.

THE article in the October "Fruit World" advocating a larger consumption of fruit pies, aroused widespread interest.

This is a subject worthy of close attention by leaders in the fruit industry.

By giving the general public the right kinds of fruit pies, served attractively, an enormously increased outlet will be found for fruit.

We now publish a letter from Miss Agnes G. Mitchell, of the High School, Castlemaine. Miss Mitchell is a specialist in cookery: she spent some years in America, and appreciates their fruit pie facilities. Here is the letter:—

Enclosed please find pastry recipes asked for. Rules for handling are similar to those published in "The Fruit World"—the less handling after adding water the better.

Mixed fat as clarified fat and lard is good; butter, of course, adds to cost of pastry, but for special occasions I use it.

We are very English in our adherence to methods of cooking, and one of the rules we teach is that "hot water pie crust," which we know as "raised pie crust," is used only for game and certain meat pies.

It is practicable to have the two crust pies made, allowing for same to be cut into segments, providing the filling is fairly dry and that there is a sufficiency.

I have used both a sandwich cake-tin and an ordinary enamel plate as containers, and find the former the better, as with most fruits it is difficult to get other than a saucer-shaped pie when using a plate. A deep, rimless plate should give the desired shape.

In most of the recipes published, the maker of pies should use discretion over quantities of sugar, as we are not, as a rule, the sweet tooths Americans are.

In the recipes I am forwarding, weights and measures are used, so I shall add equivalents in cups, spoons, etc.

Short Crust.

½ lb. flour, ½ teaspoon baking powder, ¼ lb. clarified fat, 1 gill water, pinch salt. **Method.**—Sift flour, baking powder and salt. Rub in fat till like crumbs. Add water gradually, using just enough to bind dough. Roll to size and shape required.

Good Short Crust.

½ lb. flour, 5 or 6 oz. butter or mixed fat, ¼ teaspoon baking powder, pinch of salt, 1 egg yolk, 2 tablespoons water, few drops of Lemon juice. **Method.**—Sift flour, baking powder, and salt. Rub in butter, avoiding over-mixing. Mix yolk, water, and Lemon juice, and add to flour, making a stiff dough. Turn on to floured board, and roll to shape and size required.

½ lb. flour equals 2 teacups or 8 heaped tablespoons.

¼ lb. fat equals 4 dessertspoons.

½ teaspoon baking powder equals a levelled teaspoonful.

Synthetic Fruits Drinks.

The tightening of the Health regulations in the several States in regard to synthetic fruit drinks would be welcomed by the fruit industry. Not only would the industry benefit by an increase in the consumption of pure fruit drinks, but the health of the people would be improved.

Fruitgrowers' organisations could help materially by giving their full measure of support to those who are endeavoring to bring about these desirable improvements.

FRUIT IN CASES.

Should Contain Packer's Name or Number.

To the Editor, "Fruit World."

Sir,—I often read of complaints from overseas regarding Australian fruit—loosely packed, faulty, bitter pit, etc. This could easily be overcome by every case containing a card showing the packer's name or number. In fact, every case sold in the Commonwealth should also have a similar card. In a very short time the culprits would be found out. The card could be something like this:—

> Packed by No.........
>
> If any error or fault is found in this case, please return this card to
>
> ....
>
> Sec., Fruitgrowers' Association.

A card like this would put a check on faulty packers of fresh and dried fruits.

Yours, etc.,
"Interested."

South Australia, 21/10/29.

The happiness of your life depends upon the quality of your thoughts.—Marcus Aurelius.

* * *

True happiness leaves no reaction. The mind is at rest within itself, and the consciousness is filled with the joy of living.—David Starr Jordan.

* * *

Happiness, like virtue, is acquired by practice.—Anon.

FRUIT FLY IN FLORIDA.

Is Eradication Complete?

"EXTREMELY SATISFACTORY" is the official opinion as regards the fruit fly situation in Florida. No adult flies have been found since August 8, and no field infestations since August 27.

This information is published in the official November bulletin of the Department of Agriculture of the State of California. The report further states that there were 500 new infestations found in May, 209 in June, 70 in July, and 8 in August.

This remarkable decrease in fly population cannot be explained otherwise than by the fact that a host-free period has been in operation in the affected territory since the first of June. Vigorous prosecution of the campaign has called for the complete destruction of all host fruits and vegetables, and the bait spraying with a poison syrup has kept poison constantly before any flies which may have emerged. A survey has been made of all wild hosts surrounding infested property to the extent of 600 square miles, with the result that no new infestation in the wild growth has been discovered.

The funds for fighting the fruit fly are becoming depleted, and it is officially urged that there be no relaxation of efforts until the last fly is destroyed. The question is: will there be a new outbreak later?

The California Department congratulates Florida on their courage to go into this campaign and on their patriotism to endure the loss and sacrifice which its observance has entailed. They believe the growers and public will be amply repaid.

Caustic Press Comments.

The other side of the picture is presented by certain newspapers which suggest that the fruit fly campaign was a result of a scare, and that the people have been put to needless expense. The Federal Government used 5,000 men, and spent over £800,000 in fighting the pest.

. . . . .

Australian growers will probably prefer to believe in the courage of the Florida folk who faced immense losses to rid their State of a frightful scourge. In fact, many people think that with a united campaign, the pest could be stamped out of Australia.

The fruit fly has been stamped out of several individual districts in Australia by united effort.

Florida has set Australia a great example.

Reworking Fruit Trees

Suggestions for Overcoming Fungus Infection.

(To the Editor, "Fruit World.")

I note a correspondent enquiring for a remedy against a tendency for grafts put on reworked trees to fail owing to disease infesting the bark where the limb was cut off and the graft inserted.

Should this happen it is only necessary to, as far as possible, cut away the diseased bark and swab the limb with a strong solution of bluestone and soda (Burgundy), or wash with some water in which sulphate of iron has been dissolved to overcome this trouble. I do most of my grafting with clay or mud, in which I mix some chaff to bind. I can reckon on 99 per cent. taking. Tie some bagging or scrim round the clay to keep it in place.

After the scion has made a good growth during the spring and summer, I remove the clay and bagging before the autumn and winter rains. If not removed, there is likely to be infection of the bark that your correspondent complains of. I have found ordinary friction tape a very efficient means for using on trees such as whips.

Sometimes a tree gets injured, and the bark fails to cover the wound, thereby causing the wood to die and become attacked by insects of one sort and another to such an extent sometimes as to destroy the fresh bark that is trying to overgrow the dead wood. If the diseased wood and bark are cut away and a strong solution of Burgundy is applied, in a very little time the bark grows and will in time completely cover the diseased portion.

Five pounds bluestone and 6½ lbs. soda to 15 to 20 gallons water. Apply with a paint brush or cloth.

This dressing can be applied again if necessary, as it may happen that if the tree is badly damaged and of long standing the grower may not the first time reach all the diseased part.

(Signed) "Brefni."

N. Tasmania, 21/11/29.

On the same subject, Mr. Mark T. Amos, of Fryerstown, Vic., writes under date November 20:—

Your article on the fungus disease (Polystictus), described as attacking top grafted Apple trees and eventually causing their death, has been read with interest throughout this district. My own experience (although I did not know the cause) is exactly as described by Mr. Kerr, of Tyabb.

Some years ago I top grafted about 80 Scarlet Nonpareil Apple trees on account of some attacks of woolly aphis. From then on to the present time these trees have been gradually dying limb by limb.

Mr. S. Cock, who was orchard inspector here some years ago, recommended digging some up, thinking the trouble may have been root borer or bad drainage. This was done, but no satisfactory proof was found of either.

Top grafting has been very unsatisfactory during the past few years, and has now been entirely abandoned, and no doubt the above disease is the cause of the trouble.

* * *

Scientific Investigation Needed.

It would be of great service to the industry if this destructive Polystictus fungus could be investigated by the Science Branch of the Department of Agriculture.

ROADSIDE FRUIT SALES.

Progress in U.S.A.

Roadside marketing of Peaches is the latest venture of the Illinois Fruitgrowers' Exchange, Centralia. With a heavy crop in the State, the Exchange has undertaken to carry the markets to the people. Through a subsidiary organisation, called the Illinois Growers' Marketing Association, the growers have established nine roadside markets at strategic points in the State, and placed responsible salesmen in charge, who are prepared to sell one Peach or a car load, as the customer wishes.

The Exchange is packing its own fruit under the "Illini" brand, and the Illinois Department of Agriculture is furnishing a crew of 25 inspectors to see that the packing is properly done. The brand is known throughout the State and the fruit is packed to give an attractive appearance. The roadside stands also carry vegetables and other fruits. Later in the season they plan to sell Apples and other products.

This plan of marketing was adopted after two of the large growers had tested it themselves for a few years and were convinced that it was practical. Both of these experienced men are members of the board of directors of the Growers' Marketing Association.

Australian Dried Fruits

Review for the Year by Export Board.

THE Chairman of the Commonwealth Dried Fruits Control Board has supplied some interesting information as to the realisation of dried fruit in Great Britain and other markets in his final weekly advice for the year.

During the week ending December 19, 257 tons of Australian fruit were sold in Great Britain, valued at £10,050. These included 114 tons Sultanas at an average of £37/16/6, and 142 tons Currants at £40/7/- per ton.

This brings the total sales to 31,736 tons, valued at £1,332,303 from shipments of 48,028 tons.

At the same period of 1928, sales of the 1928 harvest totalled 3,751 tons valued at £187,500 from shipments of 13,128 tons.

Stocks in Great Britain and afloat are 16,292 tons, compared with 9,377 at the end of 1928.

The following statistics refer to the 1929 harvest:—

	Shipped to date.	Unsold or Afloat.	Sold to date.	Average per ton.
Sultanas	33,200	13,458	19,742	£41 11 7
Currants	12,248	1,415	10,833	43 8 6
Lexias	2,580	1,419	1,161	35 11 5
	48,028	16,292	31,736	

It is noteworthy that shipments to Great Britain are far in excess of those of any earlier year, the highest total previously being 35,114 tons, which has been exceeded during the present year by nearly 13,000 tons.

Shipments to New Zealand, Canada, South Africa and Eastern markets have absorbed over 7,250 tons.

The average price realised for Currants, of which 10,833 tons have been sold—£43/8/6, is regarded as satisfactory. The price of Sultanas reflects the depression in market conditions for many commodities, and is the direct result of intensive selling of American fruit in Great Britain, and the quotations from a very high Turkish production, and especially the lower qualities of Smyrna Sultanas.

Apprehension is, however, felt as to the prospects of the unsold balance of Lexias, due to several causes. The market for Lexias is small and unfortunately contracting year by year, owing to the availability of large supplies of Sultanas, which are largely replacing Lexias. Spanish Raisins have fallen considerably on the London market, and in the presence of heavy supplies it appears that Australian Lexias will meet a slow and poor market.

The unsold balance of Sultanas, 13,458 tons, should be gradually absorbed during the next four months, but in the meantime financial and general conditions are causing a quiet market. As, however, stocks other than Australian are light, there should be steady consumption in the New Year.

The sale of 31,750 tons Australian dried fruit to the end of December, which represents practically 25 per cent. of the annual British consumption is, however, highly satisfactory.

AUSTRALIAN DRIED FRUIT.

Oversea Sales.

During the week ending December 12, 636 tons Australian dried fruit, valued at £23,250, were sold in Great Britain, raising the total sales for this season to 31,480 tons. Sales last week included 123 tons Currants at £37/17/9 per ton, 21 tons Lexias at £32, and 492 tons Sultanas at £36/14/3 per ton.

Stocks in Great Britain or afloat, now total 16,145 tons, from total shipments of 47,625 tons.

RENMARK A.D.F.A.

The annual meeting of the Renmark branch of the A.D.F.A. was held on December 2, Mr. Ruston presiding. Mr. H. D. Howie spoke favorably of the dried fruits publicity in England, and displayed numerous posters and photos. Mr. Peter Malloch, Irymple, gave an appreciated address on the California Raisin industry, and received a very hearty vote of thanks.

The South Australian Dried Fruits Packers' Association held a conference at Waikerie on December 3, Mr. T. G. Heming presiding. Improvements were requested with regard to inspectional matters. Instances were quoted where port inspectors had refused to pass grades which had been agreed to by shed and other inspectors.

AUSTRALIAN VISITS CALIFORNIA.

Mr. Showell says Australian Sultanas are Superior to Californian Thompsons.

Mr. T. Showell, a well-known dried fruits producer of Renmark, S.A., has recently returned from a visit to California. Mr. Showell spent considerable time amongst the vineyards. He is firmly of the opinion that the Australian Sultanas are a better quality than the California Thompson's Seedless. Our Sultanas are firmer and plumper.

Mr. Showell believes that the higher quality of the Australian fruit accounts for the substantial trade which has been won with the bakers and cake makers, there being more substantial trade in this matter in Australia than in California.

In Australia 60 per cent. of the dried fruit is sold to the wholesale cake makers. This trade, however, is lost to California.

The normal California dried fruit output is from 250,000 to 300,000 tons, but a disastrous frost in 1929 reduced this season's crop to 175,000 tons.

Mr. Showell speaks in terms of appreciation of the courtesy and friendliness of the American folk.

DRIED FRUITS BOUNTY.

A.D.F.A. Interviews Prime Minister.

The Australian Dried Fruits Association recently sent a deputation to the Prime Minister (Mr. Scullin), requesting the establishment of an Equalisation Fund to insure growers the minimum cost of production, based on a sliding scale of yields per acre.

The deputation stated that the request did not refer to the 1930 crop, but that the equalisation could commence as from the middle of 1931. Some form of financial assistance was necessary because the industry was in a parlous state. There were 30,000 people directly connected with the industry.

In reply, Mr. Scullin stated he was sympathetic towards the industry, and was greatly impressed when he visited Mildura two years ago. He would bring the request before Cabinet and give his reply about the end of January.

EXPORTS OF RAISINS FROM U.S.A.

According to figures issued by the Californian Dried Fruit Association, exports of Raisins from U.S.A. have grown from 90,782,980 lbs. in 1924-25 to 193,098,517 lbs. in 1927-28.

"HARRY JOHNSON'S (IRYMPLE) DIP."

This is a dipping mixture for the treatment of dried fruits (Sultanas and Lexias), and is marketed by the Aurora Packing Co. Pty. Ltd., as sole distributors for the proprietors, Mr. Harry Johnson, of Irymple. This dip was first marketed in 1928, and was used with a considerable measure of success by those growers who treated their fruit prior to the adverse weather which affected a portion of that year's harvest.

During the 1929 season, sales of the mixture were extended considerably, with the result that sufficient of the dip was sold to treat approximately 25,000 tons of fruit. The bulk of the mixture was sold in the Mildura district, but it was also introduced into South Australian fruit-growing areas, Nyah (Victoria), and the Murrumbidgee fruit-growing area of New South Wales.

We understand that plans are now being made for a further extension in these districts for the 1930 season.

Results achieved by growers who used this dip are highly satisfactory, inasmuch as there has been a distinctly better price obtained in the United Kingdom market for that fruit treated with "Johnson's dip" as against the ordinary caustic dip. This difference is reported to be a matter of several pounds sterling per ton.

It is claimed that a higher grade is obtained for the fruit on delivery at the packing shed door as against the hot dip fruit, and that in all respects it compares favorably with cold dip fruit, having this year, on the London market, obtained equal favor and prices.

Further particulars are being obtained in this connection, and it is hoped to later report the exact monetary benefits obtained by growers who used "Johnson's" dip during the 1929 season.

P. & O. Company's Diary.—The editor acknowledges with pleasure having received from Messrs. MacDonald, Hamilton & Co., Melbourne, a 1930 Diary and Almanac issued by the P. & O. Company. Much useful information is included regarding shipping and trade statistics, and there are several maps.

Frost Fighting.

Success at Harcourt.

By Using Wood Fires the Crop was Saved.

MARKED SUCCESS in combating frost came as a result of the enterprise of Mr. W. Eagle, Jnr., of Harcourt, Vic.

Asked to describe his methods, Mr. Eagle writes as follows:—

Mr. J. M. Ward (Superintendent of Horticulture) first gave me the idea of trying fires, and he very kindly posted me the booklets issued by the University of California, detailing their methods of orchard heating.

T. STOTT & SONS
Fruit Merchants
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A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

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(W. P. COOKSLEY)
Reliable Fruit Agents
Over 30 Years Experience
TRY THEM!
Telegraphic Address:
"COOKSLEYS," BRISBANE
Fruit Exchange, Brisbane
QUEENSLAND
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Reference: Commercial Banking
Co. of Sydney Ltd.

In the first place the American authorities stated that smoke was ineffectual, so I relied absolutely on heat.

Wood Fires.

Proper heaters of course were out of the question on account of their cost. Fortunately I am next door to a scrub paddock, so that there was plenty of wood available.

I selected a patch of orchard having the largest trees and which were most heavily laden. The fires were laid as soon as the trees flowered. They were placed down every second row, thus:—

. x . . x . . x .
. x . . x . . x .
. x . . x . . x .
. x . . x . . x .

The dots are the trees and crosses are the fires. Every second row was left clear to enable the spraying to be gone on with.

The night of the frost I had a properly tested thermometer placed in the orchard, and when it fell to 27 deg. Fahr. I lit the first fires, viz., every second one in the row.

This was at 3 o'clock.

The temperature quickly rose to 31 deg. and held at that until 4.15, when it started to fall again. I then lit the remaining fires, the temperature went up to 31 and remained at that until sunrise, when, of course, the danger of it falling again had passed.

Satisfactory Results.

Now, as to the results, which are the most important part to growers.

In the patch treated with fires, Munroes set two-thirds to full, outside none; Rymers, inside area full, outside area half and badly marked; Five Crowns, inside area, two-thirds, outside area under a third.

These were the three varieties in the area experimented with. There were also about a half dozen Jonathans inside this area, and they also have a full crop, outside it they have probably a fifth.

Mr. Ward has been up twice to see the results, and is quite satisfied.

Needless to say. I am also satisfied, and I intend to treat the whole orchard in the same manner next season.

Any further information you might desire I would be only too willing to supply.

* * *

Mr. Eagle is to be congratulated on this success. This experience will surely prove of value to his fellow growers.—Ed. F.W.

What doctor possesses such curative resources as those latent in a spark of happiness or a single ray of hope? The mainspring of life is in the heart. Joy is the vital air of the soul, and grief is a kind of asthma complicated by atony. — Henri Frederic Amiel.

QUEENSLAND.

Mr. And. Philp, of Grantham, Queensland, writes on 30/11/29:—There is only citrus fruit grown in this district for market.

The prospects for this season are fairly good, if it rains. If it doesn't rain, there may be a big drop, it pretty well depends on the weather.

Some orchards can be irrigated, but water is not available on others.

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

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Fruit & Vegetable Salesman
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WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

BRISBANE FRUIT EXCHANGE.

Interesting details of the Brisbane Fruit and Produce Exchange are given in a letter from the Secretary, Mr. R. A. Alexander, as follows:—

These markets are situated in the heart of the city of Brisbane, with a frontage of 198 feet to Turbot-street, running through to Ann-street, with 132 feet frontage, and is nearly opposite the new Town Hall, having an area of one acre 20 perches.

Fruit, vegetables and produce are sold on behalf of the growers from all over Australia, and the turnover is very great. The markets are open Mondays, Tuesdays, Wednesdays, Thursdays and Fridays at 7.30 p.m. and closed at 5 p.m. during the summer months, and are open from 8 o'clock to 5 p.m. during the winter months, and close Saturday's at 12 noon.

These markets are owned by the Brisbane Fruit and Produce Exchange Limited, a company having sixty-seven shareholders, and contain fifty-three sections and fifteen shops, nine shops facing Turbot-street, and six shops facing Ann-street, and many offices.

"SHAREHOLDER."

QUEENSLAND BALLOT.

Overwhelming Majority Favors Continuance of C.O.D.

THE ballot regarding the continuance or otherwise of the Committee of Direction of Fruit Marketing has resulted in an overwhelming majority in favor of continuance. A poll on the subject was taken because 700 growers signed the necessary requisition. Of the 5,332 ballot papers issued, 3,748 were returned: of these, 3,240 voted for continuance, and 476 against; there were 32 informal votes.

TENDERS FOR THE PURCHASE OF APPLES.

The Closer Settlement Board, Public Offices, Melbourne, is inviting tenders for the purchase of 18,000 cases of Apples from vacant orchards belonging to the Closer Settlement Board in the Diamond Creek district. Full details are obtainable from Mr. E. Wallace, Closer Settlement Board, Public Offices, Melbourne.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
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Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

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H. V. GEEVES
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FRUIT EXCHANGE——BRISBANE
SELECTED AGENT FOR:
Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.
Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

.·. Citrus Culture .·.

Hints from New Zealand.

Growth on citrus trees should now be well started, and if undesirable shoots can be rubbed out before they harden, much time will be saved later on. Bordeaux, 4-4-40, should be continued for the control of verrucosis and fungoid diseases, if required, as young growth increases. Oil-spraying at 1-60 may be carried out when the main blossoming has finished, and the young growth has started. Oiling before growth commences will produce serious defoliation.

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and the Continent

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Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

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All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

Red scale is the principal pest to receive attention, and any neglect will be reflected in the defoliated condition of the tree, as well as rendering the scale-infected fruit unfit for sale. Red scale to a Lemon tree is what San Jose scale is to a deciduous tree; though the individuals are small they multiply very rapidly, and their numbers are a severe strain on the tree's resources. This small, round, reddish-yellow scale may be found on every portion of the tree above ground, including the fruit, and its distribution necessitates very careful and thorough spraying. It is generally advisable to make a second application about a fortnight later, so as to catch adults or later hatchings which may have missed the first spray.

For the control of thrips which blemish the surface of Oranges, causing roughened pale-colored patches, the addition of Black-leaf 40 will be beneficial. Icerya purchasi, the cottony cushion of fluted scale, will now be hatching, and, although held in check fairly well by the ladybird Vedalia cardinalis, any colonies should be immediately dealt with.—G. H. McIndoe, Orchard Instructor, Gisborne, in "N.Z. Journal of Agriculture."

MR. J. A. PARKES ENTERTAINED.

Mr. J. A. Parkes, the newly-appointed manager of the Victorian Central Citrus Association was recently tended a farewell dinner by the Murray Citrus Growers' Association. The services of Mr. Parkes were highly eulogised. Speakers stated that he would exercise a favorable influence for the effective organising of citrus growers throughout Australia.

Replying, Mr. Parkes stated that in 1921 South Australia sent just over 50,000 cases of Oranges to the Melbourne market. In the 1929 season the quantity was nearer 155,000 cases, showing the strong hold South Australia had on that market. It was also a reminder of the importance of co-operation between the States.

SOUTH AFRICAN CITRUS EXPORTS.

Shipments of citrus fruits from South Africa to the United Kingdom advised to November 1, 1929, total 1,184,470 boxes, as follows:—Oranges 1,093,000, Grape Fruit 59,000, Naartjes 31,000, Lemons 1,470. This compares with a total of 857,390 boxes of citrus in 1928 and 939,002 in 1927.

EXANTHEMA DISEASE.

Affects Citrus and Plum Trees.

Methods of Control.

EXPERIMENTS for the control of exanthema in Japanese Plum trees are explained by Mr. V. Cahill, Orchard Supervisor, in the "W.A. Journal of Agriculture." A summary is as follows:—

MARGETSON
& CO. LTD.
Fruit Importers &
Salesmen
30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool
Sales by PRIVATE TREATY.
Prompt Returns & Settlements
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Head Office—Covent Garden Market, London, W.C.
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LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.
Shipping Nos.
431 and 432

1. A form of the disease known on Oranges and other citrus species as exanthema, also affects various varieties of Japanese Plum.

2. The disease can be identified by the occurrence of die-back, and the presence of hard, rough, irregular fissures in the bark, often more or less covered with a dirty reddish-brown gum.

3. Gravelly soils over a stiff impermeable subsoil, and otherwise poorly drained soils are favorable for the development of the disease.

4. The cause of exanthema is not definitely known, but the disease can

be prevented by spraying with Bordeaux mixture, or controlled, when once it has appeared, by the application of crushed bluestone to the soil at the rate of about 2½ lbs. per tree during the winter.

This experience coincides with that of Smith and Thomas with exanthema on stone, pome and other fruits in California (2) and McLeery (3) with various kinds of citrus in New South Wales.

Control Measures for Citrus Scab.

Citrus scab is best known to orchardists as a serious disease of Lemons, especially in coastal district, although in wet seasons it may also attack Mandarins—the Unshin Mandarin is very susceptible—Oranges, and other citrus fruits. The disease does not damage the interior of the fruit, but the scabby or wart-like growth on the skin of the fruit spoils its appearance for market, and the disease is often responsible for extensive shedding of young fruit.

Fortunately, the period during which foliage and fruit are liable to become infected is comparatively short, and this makes it possible to protect the fruit very effectively by spraying with Bordeaux mixture (6—4—100) plus 1 per cent. red spraying oil **as soon as possible** after most of the petals have fallen from the main crop blossom in spring. Harvest all mature diseased fruit before the main blossoming commences. Pick up and burn all fallen fruit, and prune and burn all badly diseased twigs when thinning. In cases of severe infection a second spraying should be given to the Lemon crop, which sets usually about January or February, and here again the spraying should be carried out at soon as possible after most of the petals have fallen.

It is not advisable to apply the spray during droughty periods. Bordeaux mixture tends to increase the liability of trees to scale infestation; but if the spray be applied chiefly to the outer fringe of foliage so as to cover the young fruit, and not applied heavily to the inside of the tree, this tendency will be prevented to some extent. It is advisable, however, to use a red oil spray in January or February to control the scale insects or to fumigate prior to applying the Bordeaux spray. It is dangerous to fumigate within six months after once spraying with Bordeaux.—"Agricultural Gazette," N.S.W.

FUNGUS DISEASES.

Comprehensive List Being Compiled by Mr. C. C. Brittlebank.

A very important piece of work is now in the hands of Mr. C. C. Brittlebank, who was for many years the Government Plant Pathologist for Victoria, and who is now attached to the Council for Scientific and Industrial Research.

Mr. Brittlebank is compiling a comprehensive list of all the fungus diseases known in Australia, and their hosts. Only a scientist with many years of active association in the study of fungus diseases could undertake this important work. Mr. Brittlebank is highly qualified for this work, and has had to go back over old records to compile his list. The compiling of this schedule of fungus diseases is not simply of academic importance, but is of great commercial value in assisting the work of disease control.

FROZEN FRUIT IN CARTONS.

Considerable interest is being displayed in the selling of frozen fruit in 1 lb. cartons. The Gresham Berry Growers Inc. at Gresham, Oregon, started this campaign in 1928, and are confident that it will prove to be a success.

The manager of the Gresham Berry Growers Inc. further states that at present they are using a paraffine paper can, with a removable friction top. It depends mainly on whether the housewife prefers this type of container or not, as to whether its use will be continued.

The doing up of frozen fruit in cartons will mean that fresh fruit will be available, out of season, and will retain its natural odor and flavor. This should cause a considerable increase in the consumption of fruit.

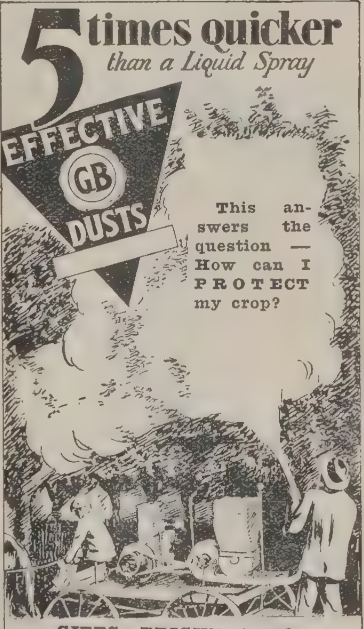
Illustrations are shown in the "Western Canner and Packer" of several varieties of these containers, which are temptingly illustrated with the fruit which is contained therein.

The Strong Silent Man.

"No," she replied, more in sorrow than in anger, "I can never be your wife. The man I marry must be strong and silent—a man I can look up to!"

"Yes?" replied the rejected swain. "Well, I advise you to pop round to St. Kilda and have a look at Captain Cook."

DUSTING



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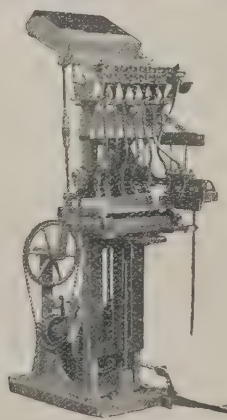

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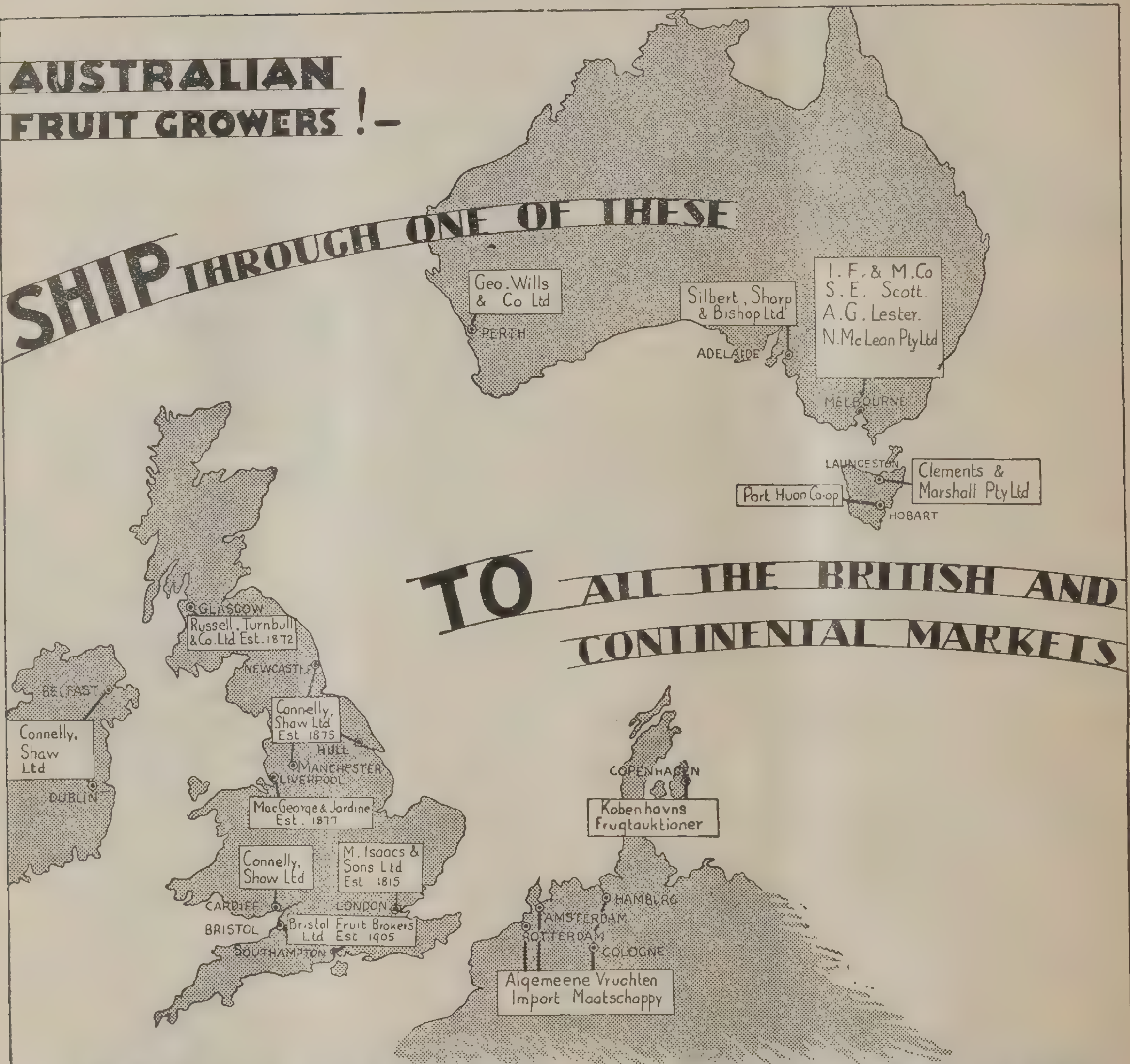
27 Grenfell Street, ADELAIDE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FRUIT GROWERS !—
SHIP THROUGH ONE OF THESE
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TO ALL THE BRITISH AND
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H.G.COLOMBIE

Temple Court, Collins-st., Melbourne.
Tel. F3284. Tel. Add.: "Columbine," Melb.

The Care of the Spray Plant.

PROPER care must be given to the spray plant if it is to function properly and last as long as it should. Much economy can be effected by attention to the different parts.

It is neither practicable nor necessary, writes the N.S.W. Department of Agriculture, to keep the exposed parts of the engine spotlessly clean, but it must be remembered that it is expected to work under somewhat trying conditions, and with no member of the spray gang free to give it undivided attention, how to keep up its efficiency must be considered. It should be looked over, if possible, after each run to see that all nuts and working parts are right, and that lubricating cups are full and feeding. This should not be neglected, as many a trouble which might otherwise cause a serious breakdown, loss of time and expense in repairs, can be nipped in the bud. The nozzle-man in charge can also take a glance during a run at the sight-feed lubricator that is generally provided for oiling the cylinder; he will soon get used to the noise of the machinery running, and if any abnormal noise occurs should at once investigate. If cared for in this way the engine will come in at night with all working parts oily, and will not require attention when being put away, though such parts should be rubbed over and freshly oiled before starting the next morning.

The cleaning of internal parts can generally be managed so as to avoid its having to be done during a spraying period, and except in very dry climates or seasons it is a job that can often be reserved for wet days. Before putting the engine away for any lengthy period all working parts should be wiped down and well swabbed with oil. The outfit should be kept under cover from the weather.

The pump should be rinsed every night on completion of spraying. Care should be taken in doing this first to rinse the tank out and then pump through clean water with the hoses off to give a clear outlet. This can be neglected if oil sprays are being used that do not cake around the valves or chambers, nor corrode the metal.

The Hose.

The hose should be rinsed every night by pumping water through it with the nozzles off to give a clear outlet; if oil has been used, soda should be dissolved in the water used for rinsing, a cask of prepared soda solution for this purpose being kept on hand during spraying operations. The operations should be carried out either after the pump has been first thoroughly rinsed, or with a separate small pump. Care in this way will lengthen the life of the hose to a very appreciable extent.

The thorough drying out of the hose when put away has not been found to

Soil Cultivation is Essential for Successful Fruit Culture

Progressive Farmers,
Vignerons and
Orchardists
Use
"HARVEY"
Farming Implements
Write for full particulars of
Horse Drawn Implements
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Fruit Graders
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To . . . .
D. HARVEY
ORCHARD & VINEYARD IMPLEMENT SPECIALIST.
FRUIT GRADERS & DEHYDRATORS.
POWER LIFT TRACTOR FARM & ORCHARD IMPLEMENTS
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VICTORIA.
Agents All States.

Tractor Working the "Harvey" Two-way 16-Plate Power Operated Disc Cultivator, cutting 9 feet.

Canadian Standard Cases

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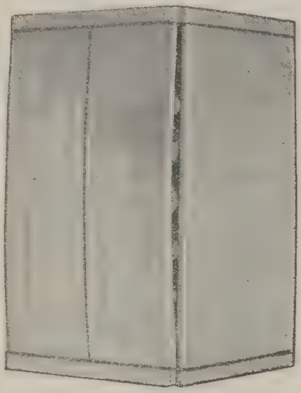
ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

Telephone: F 3148 (3 lines). Telegraphic Address: "TUTBOX."



Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

Clean Trees - Bigger Yields - Bigger Profits

Citrus "Zyklon" or "Cyca" Briquettes

THE IMPROVED FUMIGANTS will do this

CITRUS "ZYKLON" IS LIQUID HYDROCYANIC ACID GAS in a handy portable form. "CYCA" BRIQUETTES are a high-gas-content Calcium Cyanide in tablet form. Both are bought, sold and used on their guaranteed HCN gas content. A quick, high concentration is essential for successful citrus fumigation.

BOTH "ZYKLON" and "CYCA" GIVE YOU THAT.

Investigate these products before placing your order for fumigation this season.

For fuller particulars:

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46 Elizabeth St.,
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12 T. & G. Building,
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105 King William St.
Adelaide.

A Million Apples Packed For Export.
(ABOUT 6,500 CASES.)
Requires a Lot of Handling
Every Grower of 8,000 Cases or more should become familiar with
The "Lightning" Model 18

EIGHT SIZES. AUTOMATIC FEED HOPPER. ROLLAR TYPE SORTER WITH VARIABLE SPEEDS. LARGE SPRING FLOOR BINS. CULL RETURN BELT. SLIDING WOODEN CASE HOLDERS FOR RIGHT AND LEFT HAND PACKING. 1 h.p. ONLY REQUIRED. TWELVE LARGE PACKING BINS. TWO PACKING BINS FOR EACH OF THE FOUR MAIN SIZES.

For under 2¼—1 Bin 2 ft. wide.
,, small 2¼—1 Bin 3 ft. wide.
,, large 2¼—1 Bin 2 ft. 6in. wide.
,, large 2¼—1 Bin 3 ft. wide.
,, small 2½—2 Bins 3 ft. wide.
For large 2½—2 Bins 3 ft. wide.
,, small 2¾—2 Bins 3 ft. wide.
,, large 2¾—1 Bin 3 ft. wide.
,, 3 in. and over—1 Bin 3 ft. wide.

In handling a million or two of apples, a lot of time and money can be wasted. The only way in which this can be avoided is by having a machine specially designed for the purpose. Because there are so many individual apples to be sorted, sized, wrapped, packed and lidded in a short time, it is difficult to maintain a high standard of pack, and returns suffer. 1/- per case on 8,000 is £400. The "Lightning" Model 18 removes all the difficulties associated with packing large quantities of apples in one quality, and provides for the Australian grower, a better machine than can be obtained in any other part of the world.
There is a "Lightning" for every size of pack of apples, pears, plums, etc.

THE "LIGHTNING" FRUIT GRADER CO.
5 Hoddle Street Collingwood, N.9., Melbourne, Vic.
Cable and Telegraphic Address:—"LIGHTNING," Melbourne.

be necessary, in fact, provided it is from clean water, moisture in the hose is possibly beneficial. Avoid, however, hanging the hose close up to an iron roof or in any hot place. It should be kept covered with bagging or similar material.

It will be found that during use, the hose is liable to cut on the inside metal lining of the union with the rod, and loss of a couple of inches of hose quite frequently results. This can be prevented by placing two thin slats of wood on each side of the hose, extending 8 or 9 inches along the hose beyond the union and about the same distance along the rod. This can be twitched on with three wires. A piece of old felt hat or, better still, a piece of old inch hosing may be placed around the hose where the ends of the slats (which should have the inside edges rounded off) come in contact with the hose to prevent cutting from the outside. This prevents the hose hanging down on the inside metal lining and being cut. There are on the market metal bells combined with a most simple and efficient fastening which takes the place of the more primitive method described above. The hose should be tied with a piece of lashing to prevent dragging and cutting on the metal lining of the union connecting it with the pump.

Nozzles and Taps.

Except when oil sprays are being used, nozzles should be unscrewed, rinsed, and a little grease or oil put on the threads or worms. When this is neglected for any length of time, especially during the use of lime-sulphur, there is danger of the parts corroding together and it becoming almost impossible to take them apart when it is necessary to clear a chokage in the nozzle.

Open casks should be kept filled with water to prevent them drying out, and they should be kept covered with old bags to check evaporation, or they will require constant filling up, which is tiresame during a busy time, while the loss of water is no small consideration in dry districts, where the supply is limited.

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We are the largest Buyers in Australasia
C. M. BROOKE & SONS
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Shipments to United Kingdom and the Continent.
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How are we going to Maintain the Crop-producing Power of our Land

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NORTHERN TERRITORY
QUEENSLAND
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SOUTH AUSTRALIA
NEW SOUTH WALES
VICTORIA
TASMANIA

WE can think in terms of our own farms and orchards, or in terms of Australia as a whole, but the problem remains the same. The use of nitrogenous fertilisers, however, brings it nearer solution, and means more than the cultivation of a fertile soil.

SULPHATE OF AMMONIA

because of the increased yields it influences, has an important bearing on the reduction of crop costs.

Higher yields per acre mean lower production costs, and it has been said that "a shilling's worth of Sulphate of Ammonia produces a pound's worth of results."

If we take the view that farming is a business—and it is—then in terms of business, Sulphate of Ammonia increases the efficiency of the farmer's working capital.

Even in spacious Australia "acres" are losing their significance, and "acre yields" are being regarded in a new light.

Sulphate of Ammonia mixes well with superphosphate and potash to make a complete fertiliser, or it can be applied separately for independent and seasonal dressings.

Literature from
THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE
360 Collins Street, Melbourne.

VICTORIAN FRUIT MARKETING ASSOCIATION.

The first meeting of the newly-formed Executive of the Victorian Fruit Marketing Association was held at Temple Court, Melbourne, in December, Mr. H. G. Colombie presided.

Hail and Frost Insurance.—It was decided to investigate the possibility of arranging insurance against hail and frost.

Export.—Growers gave instances of rough handling, and it was decided to have the matter investigated.

It was decided to form a Pear Committee to assist in the arrangements for Pear export, also pre-cooling.

Interstate Conference.—It was decided to seek information regarding representation at the forthcoming Australian Conference of Fruitgrowers to be held at Hobart in May.

A Finance Committee was formed, and it was decided to advertise for the position of Secretary.

"There's most everything on the menu to-day, sir."

"So I see. Bring me a clean one so I can read it."—"Life."

Don't believe that everyoody else in the world is happier than you.—Anon.

"Tenders for the Purchase of Apples"

Tenders are invited immediately at — per case on the trees for the saleable apples on vacant orchards belonging to the Closer Settlement Board. The orchards are situated at Diamond Creek, Pakenham, Panton Hill, Upper Beaconsfield, Ringwood, and Somerville. The varieties are chiefly Jonathan, Rome Beauty, Five Crown, Yates, Stone Pippin, Sturmer and Reinettes. The total crop would amount to approximately eighteen thousand cases. Tenderers should note that the tenders are required for all the apples fit for sale, whether of exportable quality or not, and may be for one or more orchards.

Any further particulars required may be obtained on application by letter to E. Wallis, Closer Settlement Board, Public Offices, Melbourne, or private 'phone UY 6071.

Hay Stack Covers
for covering hay stacks, etc., onions, wheat, wool, lucerne, etc., also as a tarpaulin.

	£	s.	d.
Price: 3-Star.			
12 x 20	£2	3	0
12 x 24	2	13	6
12 x 30	3	8	6
18 x 20	3	8	6
18 x 24	4	2	6
18 x 27	4	12	6
18 x 30	5	2	0
21 x 30	5	17	6
21 x 33	6	7	0
22 x 24	5	7	0
Price: 4-Star.			
12 x 20	£3	1	6
12 x 24	3	15	0
12 x 30	4	11	0
18 x 20	4	11	0
18 x 24	5	9	0
18 x 27	6	3	0
18 x 30	6	15	0
21 x 30	7	17	6
21 x 33	8	12	6
22 x 24	6	14	6

Size 22 x 24, waggon size only, includes ropes; other sizes, ropes 3/6 extra.

Special Sizes Made to Order.
Also duck tarpaulins, verandah blinds, car covers, window blinds and all canvas goods. Please write for full list.

The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine St., Geelong, Vic.
Secondhand Sacks For Sale.
Manufactures of all Descriptions of Canvas Goods.

Soil Cultivation is Essential for Successful Fruit Culture

Harvey Methods Of
Orchard Cultivation.

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ORCHARD AND VINEYARD IMPLEMENT SPECIALIST.
FRUIT GRADERS : DEHYDRATORS
Box Hill, Vic.

COOPER PRODUCTS

UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

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Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

GLASS SUBSTITUTE FOR TOMATO HOUSES.

Cheap and Effective.

THE new form of Tomato-growing under the wax-covered fabric known as Glass-Cloth, Flex-o-Glass, etc., is being tried out in various districts of Victoria, with some success.

The material stands the rigor of the winter months remarkably well, and during the severe frosts experienced at Bendigo last winter, where enormous damage was done to young Tomato plants, a user of the wax cloth material came through unscathed.

The material is sold at about 2/6 per yard in rolls of 50 and 100 yards in length, and is easily placed in position on a supporting frame. Some growers have used it in the form of bag-shaped covers over each plant, but this is not favored where a large area is under Tomatoes.

When the value of this new glass substitute becomes more generally known, there should be a very large market for it among Tomato growers, for it has the double virtue of protecting the plants from frosts and enabling the grower to market his fruit early.

All growers know the value of early marketing. High prices have always been obtained for early fruit, and in the case of Tomatoes, the difference between early and late prices are remarkable. Hot-house Tomatoes from Dandenong are available at the Western Market at the end of winter, and bring prices up to £2 per half-case. Adelaide Tomatoes are sold during October and November for 34/- per half-case, and are followed by those grown in Northern Victoria and New South Wales, which bring up to £2/10/- per case.

Prices fall considerably during the flush of the season and as low a price as 2/6 per case has to be accepted by the grower. If the new material is going to give the grower an earlier market and an effective protection from frost, there should be a big demand for it in the near future for various products of the soil, as well as Tomatoes.

Very Fishy.

Do fish really go about in schools, mummy?"

"Yes, darling."

"Well, what happens when the teacher gets caught on a hook?"

Tested and Proved!

CLENSEL

A Wonderful Insecticide and Fungicide.

Clensel is not a new spray. It is used extensively throughout the world, and has

Won Great Appreciation
In
Australia.

The fruitgrowers' best friend. Non-Poisonous. non-inflammable. Destroys insect and fungus pests: a tonic for trees and plants.
Non-injurious.

Very effective on soft bodied insects. Can be mixed with Arsenate of Lead as a Spreader.

Full details from
Bruce Anderson
54a Hoddle Street, Abbotsford. N.9. Victoria

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

T. J. POUPART LTD.

- - Largest Firm of - -
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LONDON - LIVERPOOL - HULL SOUTHAMPTON AND GLASGOW

Consignments Solicited.
Sales on Commission by Private Treaty Only.
Liberal Advances Made on Consignments to Cover Cost, Freight, etc.

Victorian Representative:
Fred. J. Andrew, 416 Little Collins Street, Melbourne.

CANNED FRUITS—1929 SEASON'S EXPORTS.

The export of canned fruits to various destinations from the commencement of the season to August 31, 1929, were as follows:—

Destination.	Apricots. Doz. 30 oz.	Peaches. Doz. 30 oz.	Pears. Doz. 30 oz.	Totals. Doz. 30 oz.
United Kingdom..	165,635	303,480	146,551	615,666
New Zealand..	17,271	47,513	1,479	66,263
The East	1,225	2,152	2,078	5,455
Canada	5,021	51,406	3,204	59,631
Miscellaneous	926	1,402	1,320	3,648
Totals	190,078	405,953	154,632	750,663

PRODUCTION OF CANNED FRUITS.

In Dozen 30 oz. Tins.

	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.
Apricots	245,244	272,839	415,000	271,350	348,351	497,579	473,867
Peaches	1,049,071	958,102	1,287,800	1,517,998	1,242,719	1,957,377	1,282,621
Pears	274,772	491,347	568,000	458,000	343,560	789,230	526,424
	1,569,087	1,722,288	2,270,800	2,247,348	1,934,630	3,244,186	2,282,912

New Zealand.

The Spread of Fireblight.

NOW that fireblight is in the centre of the South Island and is practically certain to spread from end to end of this island, as it has already done in the North, it is time both farmers and orchardists made preparations to be ready for its appearance in fruit-producing districts in Nelson, writes Mr. R. Pattie, in the "Motueka Star." Continuing, the writer points out that fruitgrowing districts would be better without Hawthorn hedges, which act as a host for fireblight and scale.

At the same time, the destruction of Hawthorn hedges is a big and serious problem, and farmers would suffer great loss should these hedges be destroyed.

Timm & Gerstenkorn
Fruit Auctioneers and Brokers
Fruchthof . HAMBURG . Germany

Established
1885

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Special Catalogues showing prices issued after each sale

Tel.-Addr.:
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Account sales and cheques sent promptly after sale if desired cable remittance

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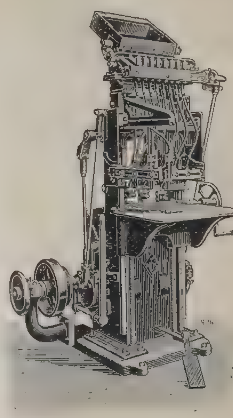
BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.
Tasmanian Rep. H. JONES & CO. LTD., Old Wharf, Hobart



Bohm & Kruse's

Case Nailing, Case Printing and Shook Splicing Machines which are Time Saving and Profit Increasing.

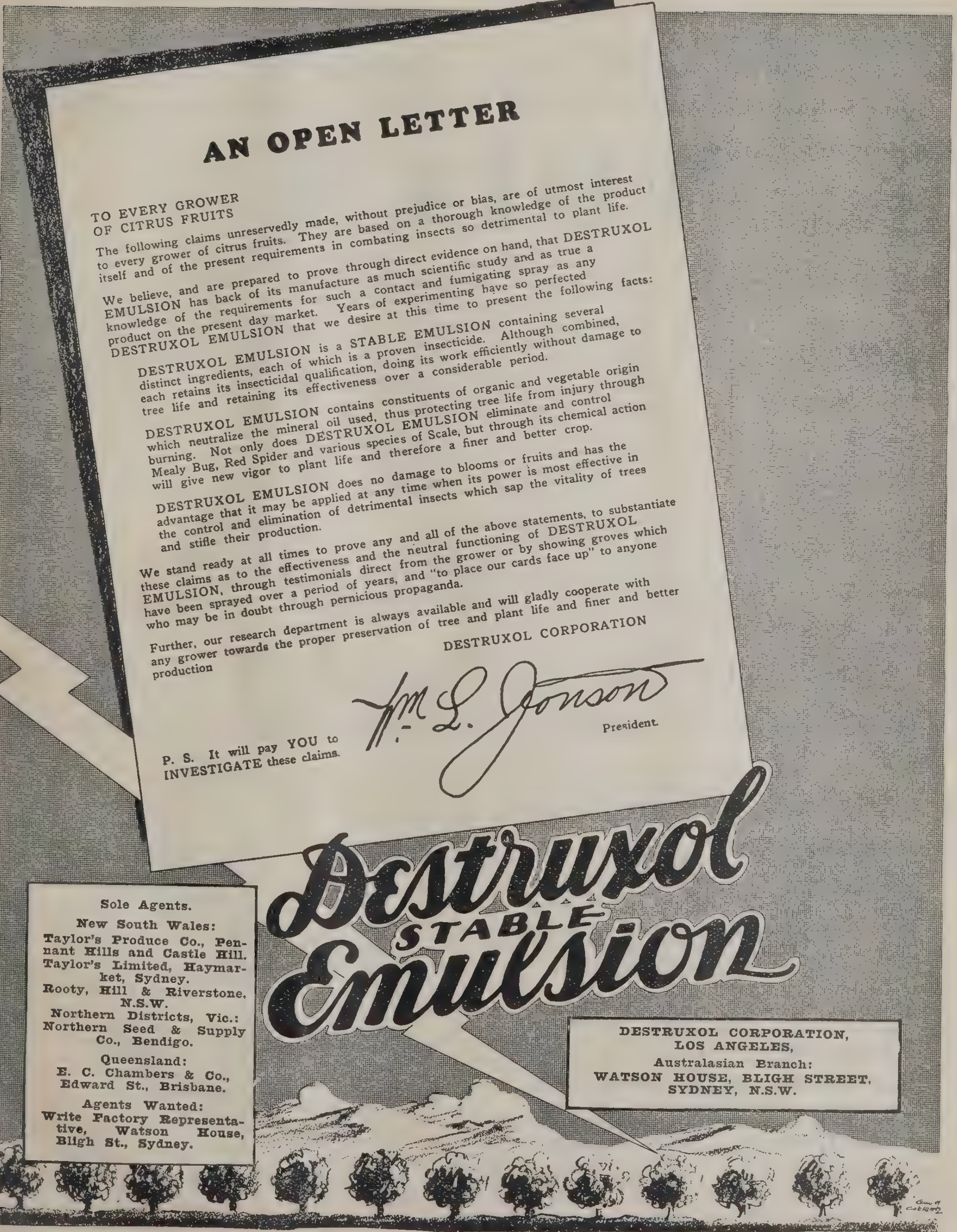
Keep yourself acquainted with modern developments in machinery. Every new labor-saving device must affect you. If your competitor adopts it, it HANDICAPS you; if you adopt it, it AIDS you.

Particulars will be gladly given by the distributors:

Victoria, South Australia, Tasmania:
MESSRS. McPHERSON'S PTY. LTD., Collins St., Melb., and Waymouth St., Adelaide.

New South Wales, Queensland:
MESSRS. GOODALL & CO., Kent St., Sydney.

Factory Representatives:
RINNE HARRIS Pty. Ltd.
434 Collins St., Melbourne



AN OPEN LETTER

TO EVERY GROWER
OF CITRUS FRUITS

The following claims unreservedly made, without prejudice or bias, are of utmost interest to every grower of citrus fruits. They are based on a thorough knowledge of the product itself and of the present requirements in combating insects so detrimental to plant life.

We believe, and are prepared to prove through direct evidence on hand, that DESTRUXOL EMULSION has back of its manufacture as much scientific study and as true a knowledge of the requirements for such a contact and fumigating spray as any product on the present day market. Years of experimenting have so perfected DESTRUXOL EMULSION that we desire at this time to present the following facts:

DESTRUXOL EMULSION is a STABLE EMULSION containing several distinct ingredients, each of which is a proven insecticide. Although combined, each retains its insecticidal qualification, doing its work efficiently without damage to tree life and retaining its effectiveness over a considerable period.

DESTRUXOL EMULSION contains constituents of organic and vegetable origin which neutralize the mineral oil used, thus protecting tree life from injury through burning. Not only does DESTRUXOL EMULSION eliminate and control Mealy Bug, Red Spider and various species of Scale, but through its chemical action will give new vigor to plant life and therefore a finer and better crop.

DESTRUXOL EMULSION does no damage to blooms or fruits and has the advantage that it may be applied at any time when its power is most effective in the control and elimination of detrimental insects which sap the vitality of trees and stifle their production.

We stand ready at all times to prove any and all of the above statements, to substantiate these claims as to the effectiveness and the neutral functioning of DESTRUXOL EMULSION, through testimonials direct from the grower or by showing groves which have been sprayed over a period of years, and "to place our cards face up" to anyone who may be in doubt through pernicious propaganda.

Further, our research department is always available and will gladly cooperate with any grower towards the proper preservation of tree and plant life and finer and better production

DESTRUXOL CORPORATION

Wm. L. Jonson
President.

P. S. It will pay YOU to INVESTIGATE these claims.

Sole Agents.

New South Wales:
Taylor's Produce Co., Pennant Hills and Castle Hill.
Taylor's Limited, Haymarket, Sydney.
Rooty, Hill & Riverstone, N.S.W.

Northern Districts, Vic.:
Northern Seed & Supply Co., Bendigo.

Queensland:
E. C. Chambers & Co., Edward St., Brisbane.

Agents Wanted:
Write Factory Representative, Watson House, Bligh St., Sydney.

DESTRUXOL CORPORATION,
LOS ANGELES,
Australasian Branch:
WATSON HOUSE, BLIGH STREET, SYDNEY, N.S.W.

South Australian Distributors:—**OVERSEAS EXPORT CO.**, 25 King William St., Adelaide.
Tasmanian Distributors:—**FERGUSON & CO. PTY. LTD.**, 10 Murray St., Hobart.

The Journal of the Dept. of Agriculture reports in connection with the control of Codlin Moth (Harcourt Test)

VOLCK

(Harcourt test—Issue Aug., '28)—"The only block which showed a satisfactory result, A3, treated with two calyx sprays of arsenate of lead followed by three sprayings with "VOLCK" summer spraying oil . . . . this seems to be the most promising line of investigation and will be considerably extended next year."

and this result has since been confirmed in a later Test—for again the Journal Reports:

(Harcourt test—Issue Sept., '29)—"These results emphasise the conclusions drawn last year, namely:—(1) Arsenate of lead alone fails to give a satisfactory control; (2) arsenate of lead sprays followed by VOLCK oil at a strength of 1 gallon in 40 gallons of water again gave a very marked increase in efficiency **over any other sprays.**"

Thus VOLCK has justified its Makers Claims————and been **proved** *efficient*

It is important to note that these tests, conducted by apple experts—**in our own country**—have not only proved the value of VOLCK, and emphasised the results obtained overseas, but completely justify the makers' claim for VOLCK—"that it **kills** the bugs that attack fruit-bearing trees."

In Western Australia

The "Journal of Agriculture" (Western Australia), September, 1929, contains the following:—"VOLCK, which was tested by the Department of Agriculture last season, gives very good results, being deadly to the aphis and non-injurious to the trees. In the test mentioned, VOLCK applied at 1 to 50 in the month of January, was very effective, killing red, black and soft brown scale on citrus trees."

For Red Scale

Volck has also been proved in Victoria to be the most effective spray in the Citrus Red Scale test —(See "Journal of Agriculture," Oct., '29). VOLCK, too, has been proved to render trees affected with Brown Olive or Black Scale, Soft Brown Scale, Indian White Wax Scale, Purple Scale, White Louse, Orange Aphis and Red Mite commercially clean **with one application.**

WRITE FOR PARTICULARS—NOW

Victorian Agents:—H. C. PANNIFEX & CO., 26 Market-street, Melbourne.
New South Wales Agents:—THE AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Sydney.
Queensland Agents:—THE AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Sydney.
Tasmanian Agents:—W. H. IKIN & SON, Hobart.
South Australian Agents:—SILBERT, SHARP & BISHOP, Rundle-street, Adelaide.
West Australian Agents:—PATERSON & CO., Perth.

THERE IS NO SUBSTITUTE FOR VOLCK

CRONIN MEMORIAL SCHOLARSHIP.

A MEETING of the Cronin Memorial Horticultural Scholarship Committee was held at the office of Mr. T. C. Alston, on December 9. There were present:—Messrs. W. H. Everard M.L.A., T. C. Alston, Harold Alston, A. W. Jessep (Principal, Burnley School of Horticulture), H. Linaker, and R. E. Boardman (Hon. Secretary). Apologies were received from the Lord Mayor (Cr. Luxton), and Mr. T. A. Stewart.

Next Scholarship.—It was decided to invite applications for the next scholarship and hold the examinations in November, 1930. The age of applicants was raised from 13½ to 16½ years. Previously the limit was 15½ years. Mr. Jessep was appointed to confer with the Education Department regarding procedure for the next examination.

Finance.—The Equity Trustees Co. submitted statement showing £1,200 in the capital account. From the revenue account, £60 had been paid as the first years' scholarship grant, and there was a credit balance of £107.

F. Keenan.—Mr. Jessep submitted satisfactory reports regarding the progress of the present holder of the scholorship, Francis Keenan.

The resignation of Sir William Brunton from the Committee was accepted with regret, and a resolution expressing appreciation for his good services was carried. The chairman expressed the thanks of the Committee to Mr. T. C. Alston, Honorary Solicitor, and J. Fox (Equity Trustees Company), for their valued assistance.

It is a great thing to cultivate the art of happiness, that we can get pleasure out of the common experiences of every day.—Orison Swett Marden.

The grand essentials to happiness in this life are, something to do, something to love, and something to hope for.

Hamburg Fruit Market
One of the Best Outputs
for
AUSTRAIAN FRUIT

GUSTAV BEY
Fruit Broker & Importer
Fruchthof, Oberhafenstrasse
Hamburg, Germany

Shipping "BEY" Brand

AGENTS:
Victoria: I.F.M. Co., 410-414 Flinders-lane, Melb.
Tasmania: H. Claude Little, Tasma House, 85a Collins St., Hobart.

Tomato Growers
What's the Early Market Worth to YOU?

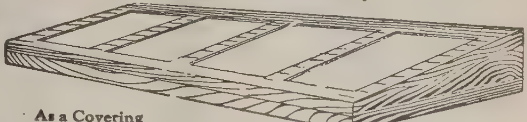
Here are some facts and figures that will open your eyes. During October and November last, tomatoes were sold in the Western Market, Melbourne, for 34/- and £1/5/- per half case. This was at the start of the season. As the season advanced, however, growers were eager to accept as low a price as 2/6 per case.

That means that the man who got the early market made a minimum profit of £3/5/6 per case over the man who got there late!

Obviously then, immense profits await the grower who can catch the early market.

Growers who grow under glass can catch this profitable market, but at great expense. Growers who use hessian **may** catch the early market at the expense of great labor.

Growers who use Flex-o-glass, can catch the early market cheaply, easily and certainly.



As a Covering for Hot Beds

Flex-o-glass fitted on your hot-beds works wonders. It is a fabric, specially made and chemically treated. It admits the healthy ultra-violet rays of the sun, which glass and hessian shut out and thereby doubles the growth of plants under it.

It keeps out frosts entirely. There has never yet been a case of plants suffering from frosts while under Flex-o-glass.

It cannot be torn, broken or cracked. It is waterproof and weatherproof. It does not chill like glass and keeps out all draughts and insect pests. It has been known to advance the growth of plants by 5 or 6 weeks and yet make them twice as big, and stronger and healthier.

Agricultural and Horticultural Colleges and experts use and recommend Flex-o-glass.

It costs less than glass, both to buy and to instal. It is just tacked into place and may be cut with scissors to any required length, size or shape. You can instal it yourself in a few minutes, and it will never need replacing. There are 500,000 satisfied users, using between them over 4,000,000 yards of Flex-o-glass to-day, and are reaping its wonderful benefits. The Curator of Melbourne Parks and Gardens uses this amazing fabric exclusively.

You too, if you want to share in the remarkable profits of the early markets should instal Flex-o-glass. Get there first next season—and get £2/10/- a half case yourself! It's a waste of time to grow tomatoes at 2/6 a case—but at 50/- a case it's a wonderfully profitable venture.

Fit Flex-o-glass and reap the profits.

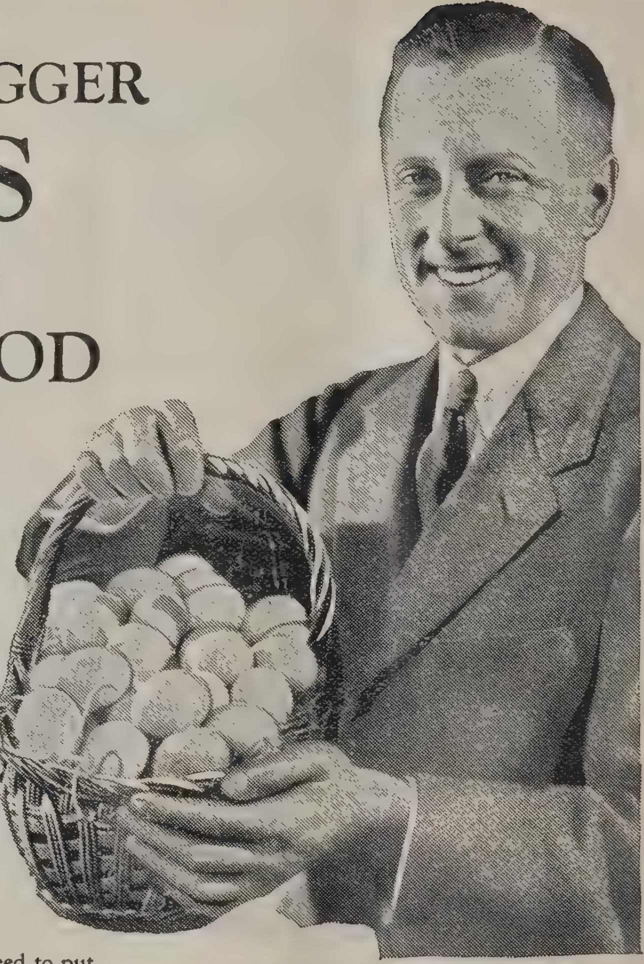
Minimum of 3 Yards by Post. 2/6 yd. 36in. Wide. Carriage Extra.

Obtainable Direct or From:
Gill & Searle Pty. Ltd., Elizabeth St., Melbourne.
Ormond Plant Farm Pty. Ltd., Ormond, & Flinders St., Melbourne, C1.
James Railton, Swanston St., Melbourne.
Watters & Sons Pty. Ltd., Swanston St., Melbourne.

Ask any of the above for a FREE LEAFLET on FLEX-O-GLASS, or post the coupon below, to

CLARK, KING & CO. Pty. Ltd.
30-32 GUILDFORD LANE, MELBOURNE. C10583

Please send me your FLEX-O-GLASS Leaflet.
Name ....
ADDRESS ....



MORE and BIGGER EGGS *by using* KARSWOOD

In every district some poultry keepers achieve better results from their birds than others. We venture to say that three out of every four successful poultry keepers will be found to be users of Karswood Poultry Spice, and the fact that they continue to be users—as many of them have ever since Karswood Poultry Spice was introduced over 15 years ago—proves beyond all shadow or question of doubt that the use of Karswood Poultry Spice continues to bring them better results. Karswood Poultry Spice increases egg output because it is a blood enricher, and it is only by enriching the hens blood that plenty of rich-yolked full size eggs can be produced. Karswood Poultry Spice coaxes but does not force, because it contains no forcing ingredients, but does contain ground insects, the birds natural tonic stimulant.

Prove this to your profit—there is no need to put up with second-rate egg results when by feeding your birds on this simple Karswood system you can obtain every egg it is possible for them to lay.

A Convincing Test

Dear Sir,

I have been using Karswood Poultry Spice for the last four years. I keep about 300 poultry, half of them free range and the other half on the intensive system. The ones on the intensive system are in five different compartments of 30 birds in each, all White Leghorns, equal in type and age The three compartments Karswood fed in three months average :—

Jan. 601, per compartment—30 birds
Feb. 589, " " " "
Mar. 565, " " " "

Two compartments without Karswood Spice average for the same period :—

Jan. 397, per compartment-30 birds
Feb, 325, " " " "
Mar. 298, per compartment—30 birds
Reduction, 735 eggs.

Yours faithfully (*Signed*) *W. UNSWORTH,*
20th May, 1929. *Thomas Estate, Shepparton, Vic.*

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/. packet of Karswood Poultry Spice, then give it to half-a dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least fortnight to produce results, but they are good and sure.

Note the Economy

1/- packet supplies 20 hens for 16 days. 2/- packet supplies 20 hens for 32 days. 13/- (7lb. tin) supplies 140 hens 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices :—

½-lb. packet, Price 1/-; 1-lb. pecket, Price 2/-; 7-lb. tin, Price 13/-; 14-lb. tin, Price 25/-; 28-lb. tin, Price 48/-.

7.M.29

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

POULTRY HELPS ORCHARDING.
Results Successful at Mildura.

Big Laying Flocks.

(By Ian P. Hamilton.)

POULTRY has been introduced successfully as an adjunct to fruitgrowing in the Mildura district, where many of the big citrus groves are now carrying flocks of layers.

The Government Poultry Expert (Mr. Rugg) has returned from a lecturing tour during which he inspected more than 6,000 birds on the various orchards at Mildura, Irymple, and Red Cliffs at the request of Mildura branch of Northern Utility Poultry Breeders' Association.

Mr. W. Elliott, of Mildura, a leading orchardist, who has been growing citrus fruits for 20 years, has a fine flock of White Leghorns in his Orange grove, and states he would not think of having a citrus grove without poultry.

The birds roost in the trees, keep insect pests away from the groves, and return a supplementary income, which is frequently very welcome, when a glut in the fruit market occurs. Mr. Elliott trap-nests in the winter only.

Demand Exceeds Supply.

While at Mildura, Mr. Rugg presented to Mr. G. J. Picton, of Merbein, a White Leghorn cockerel donated by Mr. A. J. Hill, of Sunraysia Poultry Farm, Greensborough, for the member introducing the greatest number of new members to the Mildura branch of the Association from March to May 21.

Mildura provides a good egg market, and the demand is greater than surrounding breeders can supply.

Complaints were rife concerning the poor quality of cool-stored eggs being brought into the town to keep up the supply this year.

Poultry breeders of the district are making a great saving in the cooperative buying of foodstuffs through the local branch of the Association.

BEEKEEPING.

"IN the operation of extracting honey, two things are essential,—strictest cleanliness, and the use of clean utensils," writes the Apiarist, Hawkesbury Agricultural College, in a recent New South Wales Agricultural Gazette.

"The Australasian Beekeeper"

The leading Bee Journal in the Southern Hemisphere.

A monthly magazine entirely devoted to beekeeping. Published in Australia for Australian Conditions. Subscription (5/- per year, prepaid, post free), may start now.

Free sample copy available on application to the publishers, Pender Bros. Ltd., Box 20, West Maitland, N.S.W.

Beekeepers must be careful to keep utensils clean, especially as many are in use only for a short period of the year.

Where the galvanised coating on extractors or tanks has come off in patches, a coating of beeswax is often temporarily useful. It is more satisfactory, however, to have the rusted parts regalvanised.

Paint should not be used for restoring the condition of honey extractors and tanks internally, because of the chemical reaction of

(Continued on p. xv.)

Mr. W. E. Elliott's Citrus Grove at Mildura, and his fine flock of White Leghorns.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.
Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Ross, J. W., Western Market.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.

QUEENSLAND.

Brisbane.
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.

TASMANIA.

Hobart.
E R. Cottier Pty. Ltd., 88 Collins St.
Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.

Launceston.
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.
Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.

Hull.
Connelly Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.

Manchester.
The Port of Manchester, rep., W. J Wade, 8 Bridge Street, Sydney.

Liverpool.
MacGeorge & Jardine.
Woodall & Co.

Bristol and Southampton.
Bristol Fruit Brokers Ltd.

Cardiff, Belfast and Dublin.
Connelly, Shaw Ltd.

Glasgow.
Russell, Turnbull & Co.

GERMANY.

Bremen.
Fruchthandel, Gesellschaft.

Hamburg.
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam.
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen.
Kobenhaons Fugtauktioner.

Overseas Markets.

GREAT BRITAIN.

London, Covent Garden (21/12/29).

Apples.—Blenheim Bramley, 5/-, 10/- bushel; U.S.A. Newtowns, 12/6, 17/-; Jon., 11/-, 14/-; B.C. Jon., 10/-, 13/-; Novascotia Ribstone, per barrel, 15/-, 20/-; Grape Fruit, Jamaica, 14/-, 18/- per case. Oranges.—Brazilian, per case, 16/-, 18/-; Cal., 16/-, 26/-; South African, Valencia, Lates, 18/-, 24/-. Pears.—Cal. Commas, per case, 24/-, 26/-; B. Hardy, 20/-, 22/-; D'Anjou, 21/-, 23/-; W.N., 18/-, 21/-.

Spitalfields.—Apples: Best English Apples in keen request; little demand for poorer quality. Oranges in large supply meeting steady trade. Prices: Apples, B.C. Jon., per box, 11/6, 13/6; McIntosh, 11/-, 13/-; American, Jon., 10/6, 12/3; Cal. Newtown, 12/6, 13/-; Oregon Newtown, 15/-, 16/-.

Birmingham.—Apples: Cal. Newtown, 14/-, 16/- per case. Pears, 21/- per case.

Bristol.—Oranges: Cal., 24/-, 28/-; South African, 20/-, 22/-; Vals., 300's, 18/-, 22/-; Pears: English Commas, 2/- to 6/- per doz.; Cal. Hardy, per case, 22/-, 24/-; Nelis, 20/-, 22/-; Apples: English, Worcester, per bushel, 3/- to 5/-; Bramley, 5/- to 7/-; U.S. Jon., 16/-, 17/- per box.

Edinborough.—Apples: Cal. Jon., 12/-, 13/-; McIntosh, 13/-, 14/-; Cop., 20/-, 21/- per case; Oranges: South African, 112's, 17/-; 200/216's, 21/- per case; Valencias, 240's, 21/-; 300's, 18/6; Pears: Cal. Hardy, 21/-, 22/-; W.N., 16/6, 18/-.

Glasgow.—Jon., Ex. Fancy, 11/6, 12/-; Fancy, 10/6, 11/-; R.B., Ex. Fancy, 11/-, 11/6; Fancy, 10/6, 11/-; Winesap, 11/-, to 12/- per case; Oranges, few offering; South African, 18/-, 22/-; Cal. Sunkist, 22/-, 26/-; Cal. Pears, Hardy half box, 14/6, 15/6; W.N. half box, 13/6, 14/6; cases, 25/-, 27/-; Cal. Plums, 8/- to 10/- per tray.

Hull. — Commercial Sale Rooms: Washington, U.S.A. Jon., Fancy, 118's, 13/-; 198's, 13/-; "C" grade, 180's, 12/-; 216's, 10/6; Sunkist Oranges, boxes, 216's, 22/-, 23/-; 288's, 21/-, 21/6.

Liverpool.—Apples: Oregon Newtown, 16/-, 18/-; Jon., 12/6; Pears: Commas, 22/6; Hardy, 16/-; W.N., 16/- per box.

Manchester.—Apples: English Cop., 6d. to 1/- per lb; Ellington, 8/- to 9/- per box; B.C. McIntosh, 14/-, 15/6; Jon., 15/-, 17/- per box; Grape Fruit, Blue Goose, 26/-, 28/-; Florida, 24/-, 25/-; Grapes: English Gros Colmar, per lb., 1/6 to 3/6; Muskat., 3/6, 5/6; Oranges: Sunkist, 22/6, 26/-; South African, 20/-, 24/- per box; Pears: Cal. Commas, 11/-, 13/- half box; D'Anjou, per box, 18/-, 21/-; W.N., 17/-, 20/-; Kieffer, 12/-, 14/-.

GERMANY.

Hamburg (15/11/29).

Messrs. Ph. Astheimer & Sohn, Hamburg, report the arrival of commercial quantities of American boxed and barrelled Apples. Prices:—Jon., extra fancy, 150's to 163's, 18.50 marks, to 216's, 14.75 marks. Oregon Winter Bananas, 10.0 to 13-50 marks. Oregon Gravensteins, combination, ex fancy and fancy, 12.0 to 16.0 marks, choice 11.0 to 12.0 marks.

There are substantial quantities of European grown Apples on the market.

Barrelled Apples.—York Imperial, 25.25 to 27.0 marks, unclassified Yorks, Ben Davis and Baldwins, 22.0 to 22.50 marks.

* * *

NEW SOUTH WALES.

Sydney (31/12/29).

Apples.—Victorian Yates, 18/- to 25/-; local, Carringtons, 6/- to 20/-; Nelsons and Allsopps, 6/- to 12/-; jam, 3/- per bushel case; Apricots, 2/- to 7/- per half bus. case; Victorian, 6/- to 10/- per bushel case; Bananas (genuine grades), special 28/- to 30/-, choice 22/- to 28/-, standard 17/- to 22/-; plain 12/- to 16/-, inferior, 5/- to 12/-; Cherries, 6/- to 8/-, special to 12/- per quarter-bushel case; Citrus Fruits.—Lemons, extra choice 22/- to 25/-, choice 18/- to 20/-, medium 14/- to 15/-, small 10/- to 12/-; irrigation, colored, 16/- to 22/-; Italian, 34/-; Victorian, to 24/-; Oranges, Valencias, extra choice 24/- to 26/-, special to 30/-, choice 20/- to 22/-, medium 12/- to 16/-, small 8/- to 10/-; irrigation, 12/- to 16/-; common, second crop, 3/- to 5/- per case. Gooseberries, Tasmanian, 7/- to 9/- per half-bushel case; Mangoes, 10/- to 14/- per bushel case; Nectarines, 3/- to 10/- per half-bushel case; Passion Fruit, 5/- to 16/-; Peaches, 2/- to 10/-; Victorian, 8/- to 14/- per bushel case; Pears, Clapps, 12/- to 14/-; Paw Paws, 10/- to 15/- per half-bushel case; Pineapples, Queens, green, 10/- to 14/-, colored 14/- to 16/-; Ripleys, 5/- to 10/- per case; Plums, 1/6 to 8/- per half-bushel case; Strawberries, local, 9/- to 15/- per dozen punnets;

VICTORIA.

Melbourne (4/1/30).

The following wholesale prices are supplied by the Wholesale Fruit Merchants' Association of Victoria, at the Western Market:—Apricots, 3/- to 7/- a case, few specials higher; Gooseberries, 5/- to 8/- a case; Lemons, 10/- to 18/- ; few specials higher; Oranges, average quality, 10/- to 16/-; best quality to 24/-; Passion fruit, 5/- to 10/- a ½ case; and odd lines higher; Peaches, 5/- to 9/- a case; special lines higher; small almost unsaleable; Plums, 4/- to 7/-; Cherry Plums, to 4/-; Pineapples, Queens, slow of sale at 12/- to 18/-; roughs, 8/- to 14/- a double case.

The market representative of the Federal Citrus Council of Australia reports that prices were as follows:—Valencias, counts 112 to 168, selected packs, 22/- to 25/-, few to 26/-; choice, 18/- to 22/-; medium, 15/- to 18/-; average, 11/- to 14/-; green and lower grades, some to 9/-, few to 12/-; Victorian Lemons, few to 20/-; Grape Fruit, 18/- to 22/-.

SOUTH AUSTRALIA.

Adelaide (28/12/29).

Apples, eating, 18/- to 20/- case; cooking, 6/- to 8/-; Apricots, 8/-; Bananas, 30/- to 32/- crate; Cherries, dark, 18/-; light, 16/-; Gooseberries, 8/-; Lemons, 20/- to 22/-; Loganberries, 5/6 doz. lb.; Nuts, Almonds, 10/-; Oranges, 17/- to 18/- case; Navel, locals, 23/-; Peaches, 8/- to 12/-; Plums, light, 6/- to 8/-; dark, 7/- to 10/-; Damson, 8/- to 12/-; Raspberries, 6/- doz. lb.; Strawberries, 12/-. Fruit prices are without cases.

WEST AUSTRALIA.

Perth (24/12/29).

Apples, Yates, 10/- to 17/6; Granny S., 15/- to 21/-; other varieties, 5/6 to 13/-. Oranges, plain, flats, 5/- to 13/-; dumps, 9/- to 19/-; Lemons, 6/- to 15/6; Peaches, 4/- to 15/- (inferior from 1/6); Apricots, 4/- to 12/6 (inferior from 1/3); Plums, Shiro, 3/- to 6/-; Santa Rosa, 7/6 to 18/6; Cherry, 1/- to 5/-; Nectarines, 8/- to 17/- (others from 5/3).

QUEENSLAND.

Brisbane (28/12/29).

Oranges, 4/- to 12/- bus.; Lemons, 8/- to 12/- ¼ case; Mangoes; Bowen, specials, 14/- case; others, 9/- to 10/-; Rockhampton, 9/- to 10/-; Passion Fruit, 4/- to 7/- ¼ case; Papaws, flat Orange cases, 3/- to 6/-; dumps, 3/- to 4/6 and 1/- to 2/6; Pineapples, smooth, 8/- to 15/- case, inferior, 5/-; rough, 8/- to 12/-; Rock Melons, 1/- to 14/- per doz.; Water Melons, 2/- to 29/-; Apricots, Stanthorpe, best, 9/- to 15/- per ½ bus. case; others, 4/- to 9/-; Peaches, Stanthorpe, 4/- to 9/-; Plums, Stanthorpe, best, 6/- to 10/-; others, 2/- to 5/-; Nectarines, Stanthorpe, 4/- to 8/-; Apples, Stanthorpe, cooking, 5/- to 9/- bus. case; eating, 14/- to 20/- and 8/- to 12/-; Grapes, white and black, 5d. to 8d. per lb.

NEW ZEALAND.

Dunedin (27/12/29).

Messrs. Reilly's Central Produce Mart Ltd., report:—Owing to the heavy rain experienced prior to the holidays, the market is short of requirements, and exceptionally high prices were paid for some lines. Prices were as follows:—Strawberries, choice, 1/6, 2/3; jam Strawberries, 9d., 1/3; Cherries, 10d., 1/11; Peaches, crates, 6½d., 8½d. lb., cases 6/9, 8/-; Raspberries, 10d.. 1/- bottle; Black Currants, 5½d., 6d.; Red Currants, 5½d., 6d.; Cherry Plums, 2d., 4d.; local Grapes, 4/9, 5/-; Apples, Canadian Winesaps, 22/6; Mission Lemons, 70/-; Grape Fruit, 40/-; Bananas, ripe, 32/6.

FRUIT TRADE NOTES.

Spanish Fruit Trade Conference.

The first international congress of growers, shippers and importers of Spanish fruit was recently held at Barcelona, Spain. Delegates attended from many European countries, and the chief matters dealt with were production, commerce and transport. Under these headings very important decisions were arrived at.

It was decided to hold the next Conference at Valencia, in 1930.

PROGRESSIVE MACHINERY FIRM.

Ronaldson Bros. & Tippett, Ballarat.

High quality workmanship is the outstanding feature of the machinery manufactured by the old-established firm of Ronaldson Bros. & Tippett, Ballarat, Victoria. A wide range of machinery is manufactured. Those of special interest to fruitgrowers include spray pumps, petrol, kerosene, and crude oil engines, and electric lighting plants.

Our recent visit to the firm's works was full of interest, under the courteous piloting of Mr. Ronaldson. The general impression of the works, which cover over three acres, is that of orderliness and efficiency. The layout is so designed as to secure coordinated effort. In the spray pump section we noted machines in various stages of construction; there is an increasing demand for these pumps in all the Australian States, the quality of the material and workmanship being appreciated. In fact, the Ronaldson-Tippett spray pump was actually designed by growers. The essential points desired by growers were described and demonstrated, when the firm's engineers completed the construction on the lines indicated.

The manufacture of internal combustion engines is a leading feature of Ronaldson Bros. & Tippett's works. The fact that every engine made for the past twenty-five years is still at work and giving satisfaction shows that Australian engineers have triumphed in their manufacture.

Crude oil engines ranging in sizes from 10 h.p. to 65 h.p. have proved very economical for installation in cool stores, and in works generally where power is needed. The engines can also be used in the generation of electricity for town lighting.

Electric Lighting Plants. Here is a proposition which should appeal to the fruitgrower and the man on the land generally. When all is said and done, the home is, or should be, the place of inspiration for the present and rising generation.

Electric light is one of the desirable comforts, lessening the toil of the women folk, improving the efficiency of the man on the land, and of very practical service to the boys and girls who are coming on.

The electric lighting plant is not expensive to instal. Even if the cost be ever so slightly greater than other methods of lighting, it has advantages far in advance of any other systems.

Ronaldson Bros. & Tippett supply complete electric lighting plants of all sizes and types. Electricity is clean and safe. It can be used for lighting, ironing, etc. It is one of the things which makes country life more attractive. Full details of this electric lighting plant, cost of installation, etc., are obtainable from the firm.

Other machines manufactured by this progressive firm are chaffcutters, sawbenches, motor dragsaws, pumps, petrol engines, sheep shearing machinery, wool presses, etc.

A walk round the works enables one to see the sheet metal and welding department; the making of castings; the machine shop; carpenters' and blacksmiths' shop, etc. Altogether, Messrs. Ronaldson Bros. & Tippett have established at Ballarat a manufacturing plant which is efficiently conducted and which is turning out high quality machinery of effective service to the man on the land.

"Fruit World" Appreciation.

We get many useful points from the "Fruit World," and wish you a happy and prosperous New Year.

(Signed) A. W. WALLIS.
Fenwick, via Geelong.

For Quality Fruit and Vegetables

Dicky
KILL·INSECTS!

AS A SPRAY, "Black Leaf 40", Nicotine Sulphate, kills aphis, thrips, leaf-hopper, red-bug, psylla, etc., both by contact and by its nicotine fumes. Combine it with Lime Sulphur, Lead Arsenate, Bordeaux, etc., if you wish, and make one spraying do double duty.

AS A NICOTINE DUST, for orchards, truck crops and gardens, mix "Black Leaf 40" with an alkaline carrier such as Hydrated Lime, as described in our free spraying and dusting chart.

"BLACK LEAF 40" is the world's leading nicotine insecticide. Endorsed by Experiment Stations. Deadly to all soft-bodied sucking insects. Non-injurious to foliage. Ask your Experiment Station.

KILLS BY CONTACT and FUMES

While the effectiveness of "Black Leaf 40" is primarily dependent upon direct contact (wetting), a secondary advantage is furnished by the "gassing" effects of the penetrating nicotine fumes set free in the spraying material. This two-fold action is an advantage not possessed by any non-volatile spraying solution.

"BLACK LEAF 40" CONTROLS POULTRY LICE

The treatment requires only a small paint brush, a can of "Black Leaf 40" and a few minutes' time for "painting" the solution on top of the roosts. Easy, effective and cheap. Eliminates all individual handling of birds. Ask your Dealer for information or write us.

Just "Paint" It On the Roosts

Kills lice on your entire flock, whether 50 birds or 5000. When chickens perch upon roosts that have been painted with "Black Leaf 40", fumes are slowly released that penetrate the feathers and kill the lice.

TOBACCO BY-PRODUCTS CHEMICAL CORPORATION, Incorporated
Louisville, Kentucky

"Black Leaf 40"
40% Nicotine

PROTECTS ORCHARD AND GARDEN
Black Leaf 40
KILLS POULTRY LICE

The Distribution of Imported Fruit in British Markets and Some Economic Deductions.

(To the Editor, "Fruit World.")

THE "Railway Correspondent" of a Manchester newspaper contributed the following paragraph under the date September 18:—

> "What is probably the biggest special order ever handled by a British railway company for one customer has just been dealt with by the London, Midland and Scottish railway, who, at the request of a Manchester fruit dealer, arranged for two special goods trains to convey 1,200 tons of Californian Oranges from the London Docks to Manchester."

Two thoughts immediately spring to mind on the reading of that paragraph. One is that a great deal of time, money and energy are being wasted on these Oranges. Manchester is a port: but it is decreed that they shall be put into railway waggons and jolted nearly 200 miles to Manchester. They will be none the better for this unnecessary handling, and it will cost more to get them to their destination. Put briefly, it may be said that there will be a probable loss of quality in the goods, and an undoubted loss of time and money.

The second thought is: What a market! A market which needs to be catered for by such orders as these must be worth considering. The population of Manchester is about 770,000. Is this fruit dealer wandering in his wits to place an order which will give rather more than 3 lbs. of Oranges to every man, woman and child in the city? Do Manchester people eat Oranges to that extent?

Well, they eat a great many, but it is certain that a large proportion of the Oranges included in this vast order, will go out of Manchester almost as soon as they come into it. The Campfield Fruit Salerooms, Manchester's centre for the distribution of imported fruit, deals with buyers who come from as far north as Dundee and as far south as Birmingham. This throws an interesting light on the deal we are considering.

Many of these Oranges, which already have been unnecessarily bumped along the line from London to Manchester, will shortly be bumping back again along the rails and roads between Manchester and London. It doesn't seem reasonable. It might have been done this way:—The ship berths in Manchester Docks; sample boxes of the Oranges are taken to the adjacent salerooms, so that the quality may be guaranteed. They are auctioned and ordered to be sent here and there. The organisation of the salerooms is such that, if the matter is urgent, the Oranges can be transferred from steamer to lorries for road transport, or waggons for rail transport before the market has finished its session. It is all done with one handling; straight from the ship into the conveyance, which will reach the final destination in one journey.

The more one looks into this spectacular deal, the more one finds sound economic reasons for questioning the way it was done. One can only assume that the dealer had to get the Oranges to Manchester the best way he could.

To get them to Manchester any way is better than not to get them to Manchester at all. For what unparallelled opportunity is presented! In fact, for Apples, Pears, and imported fruit or other produce of every variety, there is no other place in the world where the buyers are so many within so small an area.

One of the great difficulties in many walks of life is lines of communication. Manchester sends its commerce radiating in all directions through miles and miles of buyers—and nowhere does the line grow thin. Those buyers are increasingly alive to the importance of fruit in diet. A table which has just been compiled, showing the trades and dealers in Greater Manchester, gives 1,536 fruiterers and fruit merchants, while the meat salesmen, butchers and pork butchers lumped together, number only 921. You can add the 55 fish and game salesmen, and the 28 poulterers, and still you have only 1,004 dealers in all these branches, against the 1,536 who deal in fruit.

This is confirmation of a fact pointed out again and again recently that British habits are changing, and the people steadily continue to eat more fruit and less meat!

Yours, etc.,
Wm. Jno. WADE,
Sydney, 29/11/29.

USEFUL BOOKS.

IN these days, when growers are seeking for the best and most economical methods for profitable fruitgrowing, it is of value to get new ideas from every quarter. California has been termed the "Garden of the World." Some splendid books are now offering from the pen of Prof. E. J. Wickson, late emeritus Professor of Horticulture, University of California, one of the best known of Californian horticulturists.

"California Fruits, and How to Grow Them."—Contains over 500 pages of text with many illustrations. Goes thoroughly into every phase of the immense Californian fruit industry. Of unique value to Australian producers. 17/6 post free.

"California Garden Flowers, Shrubs, Trees and Vines."—The third edition. Well illustrated and complete with useful information. Price 9/6 post free.

"California Vegetables."—Contains 300 pages of reliable information on how, when, and where to grow vegetables in the garden or field. Beautifully illustrated. Price 11/6 post free.

Other valuable books are as follows:—

"Manual of Rural Appraisement."—Dealing with the principles and methods for determining farm land values. Factors influencing loaning values of farms and orchard lands, vineyards, citrus groves. Of service to every producer. Price 9/6 post free.

"Second Thousand Questions."—Being 1,000 answers to questions asked by fruitgrowers. A unique book of practical value. Price 4/6 post free.

These books are thoroughly recommended as being of great value to Australian producers.

Copies of the foregoing are obtainable from the Fruit World Pty. Ltd., Box 1944, G.P.O., Melbourne.

Beekeeping Notes.

(Continued from p. 541.)

honey when brought into contact with the painted surface. There is risk of damaging the honey and introducing some poisonous ingredients from the paint.

When not in use, extracting apparatus should be thoroughly washed with hot water, dried and covered so as to be free from moisture or dust. Depreciation is thus reduced to a minimum, which means a longer life for the apparatus and better quality honey.

IMPERIAL FRUIT SHOW.

The Imperial Fruit Show, which was held at Birmingham in October, was opened by His Royal Highness Prince George, and was a great success.

The show covered an area of 60,000 square feet. The Empire Marketing Board occupied a large space with an exhibition of fruits from Canada, Australia, New Zealand, South Africa, Malaya and the West Indian colonies. Several prizes were won with Australian canned fruits.

GLASS CLOTH.

The use of glass cloth as a substitute for glass is recommended by scientists, fruitgrowers, and nurserymen. Glass cloth is a fabric which admits the healthful ultra-violet rays of the sun. For hot beds and garden frames glass cloth has proved its superiority. By having Tomato plants under glass cloth shelters, the plants respond wonderfully. It is very strong and durable, and is very serviceable for poultry houses.

Glass cloth is being used largely instead of glass for windows in homes, also packing houses, etc.

Illustrated pamphlets and particulars are obtainable from Messrs. Donohoe & Thompson, poultry requisites and hardware merchants, 367 Post Office-place, Melbourne, C.1.

Canadian Standard Cases are offered by Messrs. C. H. Tutton Pty. Ltd., 40 Queen-street, Melbourne. A picture of the Canadian standard bushel case and description of the advantages of same are included in the advertisement in this issue.

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FRUIT BROKER
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Protect Your Tomato Plants
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Denmark Wants our Victorian Apples
SHIP TO
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Who will arrange the necessary shipping space, etc.

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NO MORE WASTE FRUIT OR VEGETABLES

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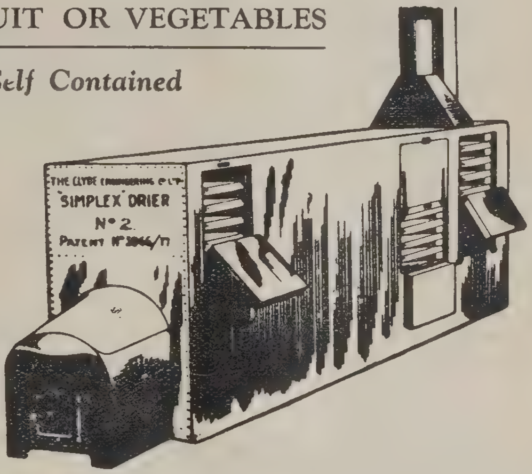
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Made in Sizes to Suit

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GRANVILLE, N.S.W.

Co-operative Box Co. of Victoria Ltd.

BOX WORKS: YARRAVILLE AND WARRNAMBOOL

We have the Largest and Best Equipped Box Factory in Australia.

Fruit Cases of All Descriptions

Out of Imported Softwood.

CANADIAN STANDARDS, BUSHELS, DUMPS, GRAPES, SWEAT BOXES, ETC.

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Telephone: Footscray 285.
Telegrams: Coboxco, Yarraville.

The Care of Farm Horses.

FIRST select a team of horses of a good type,—active and with a good set of hoofs and teeth. If a horse has bad hoofs it is not able to seek proper feed, which results in a poor condition of the animal.

Horses still hold their own, and will for some few years to come, though many farmers have replaced their teams with a tractor.

To ensure a good fast team, one should breed young horses each year, not break them into harness too young, feed good chaff, and keep horses well shod. Horses should be fed, while working, three or four times a day; each horse should have just as much feed as it can eat at one feed. If more feed than can be eaten is fed, it becomes stale, and is injurious to horses.

Before being put to hard work after a spell, horses should have about a week's stable feed, and not be worked too heavily for the first few days. If a team is overloaded it will not work satisfactorily.

To prevent scalding of the shoulders, wash the shoulders, especially those of a young horse, with clean cold water each evening. Collars should be kept clean, special care being taken against old scabs being stuck to the collars. If sore shoulders develop, a breastplate is often advisable in such a case.

Diseases or ailments of any kind should be promptly attended to. To handle a horse successfully a person should have patience, be kind, have a strong will, and no fear.

The stable should be free from sharp edges or projections of any kind on which horses may be injured.

A water trough should be supplied to the stable, as horses oftentimes will not have a proper drink when coming in from work. With a trough in the stable they are at liberty to drink at intervals as required. A salt lick should also be supplied. Horses expected to do good work should be well cared for. I do not think it advisable to dispense entirely with draught horses on the farm.—C. Obst, Bureau of Agriculture, Kilkerran, South Australia.

A NEW APPLE.

A new Apple is reported from Virginia, U.S.A. This is Blaxtagmon, a new red Stayman, which possesses all the good qualities of the well-known Stayman, with the additional features of being a solid red color. The variety originated in the Pacific North-west, and is advertised by the Titus Nursery Co., Waynesboro, Virginia.

Goodman's FRUIT TREES

A Good New Year Resolution

By deciding to plant only Goodman Trees in 1930 you will do yourself a really good turn. For Goodman's Trees enjoy an enviable reputation for sturdy growth and splendid bearing of finest marketable fruit. Get full particulars and

FREE CATALOGUE

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(W.-McF.)

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'Phone: Cent. 4417.

Geo. Lister Pty. Ltd., representing some of the leading houses in the British and Continental fruit trade, desires to inform growers of Apples, that they are prepared to receive on consignment or will purchase Apples for the United Kingdom, Denmark, Sweden, Holland, Germany and Norway.

Further information may be obtained by communicating with—

GEO. LISTER PTY. LTD.

Grubs and Eggs in Dried Fruit

are the terror of the fruitgrower, the grocer and the consumer. All dried fruits, nuts, etc., coming into Australia should be sterilised to kill all the grubs and eggs present. As all insect life and eggs

Can be Completely Eradicated

by the Hydro Vacuum process, Australian Dried Fruit could be so treated, and sent out in sealed containers to prevent re-infection. With such delightful, clean fruit, public confidence would be gained, resulting in mutual satisfaction and bigger trade. The old-time fumigating system has been rendered obsolete

By the Sterilizing Process

perfected in Victoria and patented through the Commonwealth. Strict tests under Government supervision prove that this process is absolutely satisfactory in the destruction of all insect life and eggs in dried fruits, nuts, grain, borers in timber, eelworm and bulbmite in bulbs. This effective system

Of the Hydro Vacuum Fumigation Co. Ltd.

is in operation at the Company's works, Ingles-street, Port Melbourne. The penetration of the lethal gases is complete, without opening cases or cartons. Further, the goods are in no way harmed. Full information is contained in a descriptive booklet obtainable free on request. This contains report of demonstration on September 4, before Federal and State Government officials.—Write for your copy now.
The Hydro Vacuum Fumigation Co. Ltd., officially registered as a Quarantine Station by the Plant Quarantine Department. Works: Ingles-street, Port Melbourne. Office: Temple Court, Collins Street, Melbourne, C.I. Phone: Central 2670.

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Also at COVENT GARDEN MARKET W.C. and STRATFORD, MARKET, E.

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Sales on commission by private treaty only. We do not buy from any source.

We occupy extensive premises in the main street of the NEW SPITALFIELDS MARKET EXTENSION—the largest fruit and vegetable market in the United Kingdom. Our facilities for rapid and efficient handling are unsurpassed.

Spitalfields (the nearest market to the London Docks and Wharves, with railway connections to all parts of Great Britain), has recently been remodelled on up-to-date lines at a cost of £2,000,000. It possesses roads and approaches far in advance of any market in London, thus providing for the increasing motor transport.

In addition to 7,000,000 potential consumers in the Metropolis, we have customers in practically every town of importance in the British Isles: therefore, we are in a position to place consignments where the keenest demand prevails.

Every consignment received is sold on its merits, strictly in accordance with the HORTICULTURAL PRODUCE (Sales on Commission) ACT, 1926, and each individual sale recorded; therefore, consignors can be assured of receiving exactly the same price as their fruit realises.

Private sales have a distinct advantage over auction sales, the former ensuring more stable prices. Average prices obtained are ample proof of this.

We strongly recommend accurate grading, and a uniform weight of 40 lbs. to the case; also that no 2¾in. or 3in. Jonathans be shipped: then a higher average price will automatically result.

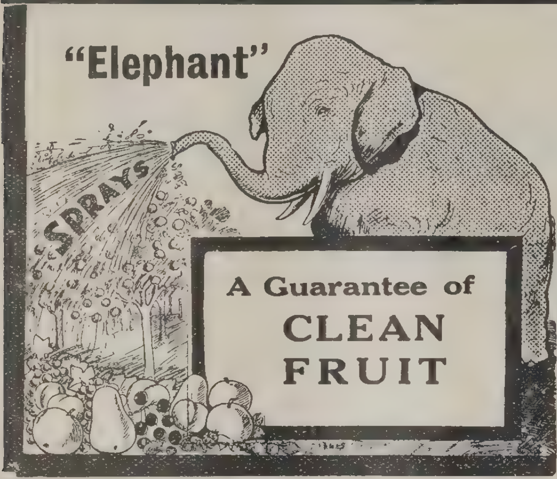
Our results have pleased Australian growers in the past—especially in the big season of 1928. With our improved facilities we can, with advantage,

INCREASE SALES THREEFOLD

Victorian growers, ship through our agent:

F. R. MELLOR, 440 Elizabeth Street, Melbourne. C.1.

Consignments also desired from Western Australia, but only from reliable, genuine packers.



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Order Now—

Arsenate of Lead

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We strongly recommend growers to use Paste, as we feel certain they will obtain better results than by using Powder.

Paste is finer and more adhesive.

For growers who intend using Oil to help control the Codlin Moth, we can supply you with a White Oil Emulsion similar in all respects to the imported article, and at a lower price.

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"Vallo" Orchard Sprays, A. Victor Leggo & Co., Melbourne, Sydney and Brisbane, p. vii.
"Black Leaf 40," Producers' Distributing Soc. Ltd., Melbourne, p. xxv.
Black Leaf 40—Tobacco By-products Corporation, Louisville, Ky., U.S.A., p. 88.
Berger's Arsenate of Lead, Neptune Oil Co. Ltd., River St., Richmond, Vic., and all States, p. xi
"Volck," H. C. Pannifex & Co., 26 Market St., Melbourne, p. 82.
"Yarra" Fruit Sprays, Parsons & Jaques, 6 Patterson St., Abbotsford, Vic., p. 64.

Spray Pumps and Guns—
"Bave-U" Power Sprayer, Russell & Co., Box Hill, p. 87.

Strapping Fruit Cases—
Gerrard Wire Tying Machines Co. Pty. Ltd., 119-125 Hawke St., West Melbourne, p. vi.

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Transport—
London and N.E. Railway, Burns, Philp & Co., agents, p. xxii.
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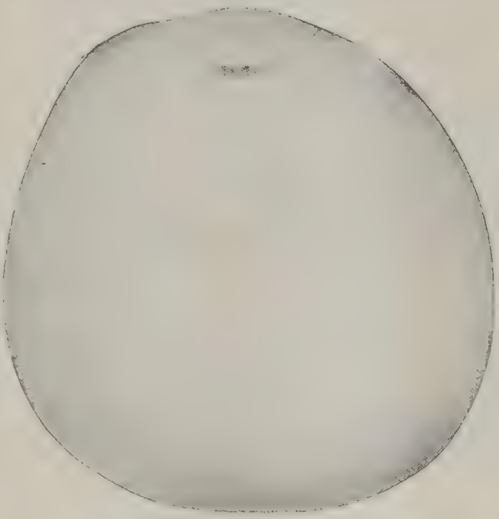
Trewhella Bros., Trentham, Victoria, Stumping Jacks, etc., p. ix.
"Digger," Quick Manufacturing Co., 75 Stumping Jacks, etc., p. xxv.



Munro's Favorite.

FRUIT TREES

Mr. Commercial Grower!

AN OPEN LETTER

Vast possibilities await the man who looks ahead—not next year or the year after, but for many years. Can he visualise the millions of people in this great universe who want fruit? Now, Sir! think for yourself—a marketing business has been instrumental in placing before these fruit-hungry people the ways and means of supplying this great necessity of life.—One man, first try, first season, sold 55,000 cases Apples, and this season something like 120,000 will be the figures sold in this way. It has been done, and will be done, that we venture to say that in 5 years hence Australia will not have a surplus, but a shortage of hundreds of thousands cases of fruit. Get busy—for your old orchards will be going back, and you will not have the fruit when required. Get in on the boom.

Information, etc., from

JOHN BRUNNING & SONS

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Established 1866. Code: Bentley's Complete Phrase.

"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

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Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement notwithstanding the fact that a contract may have been entered into for the use of a certain space.

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U.S.A. CITRUS CROPS.

The estimate of citrus production in Florida for 1929-30 shows a probable commercial crop of 9,700,000 boxes of Oranges and 6,300,000 boxes of Grapefruit. This total of 16,000,000 would be about 30 per cent. less than the 1928 commercial production of 23,200,000 boxes of the two fruits in Florida. The combined crops of Oranges in Florida and California are expected to be about 68 per cent. of last year's yield.

FRUIT CASE TIMBER.

Drawback of Duty on Imported Shooks.

The recent increase of duty on imported timber caused much concern to fruitgrowers, who feared that this would increase the cost of fruit cases—particularly the white softwood cases which export markets are now demanding.

The Victorian Fruit Marketing Association has rendered good service to the industry by presenting the case for the growers to the Customs Department, with the result that although the duty has been increased, there is to be a full refund of such duty on the cases being exported.

Brown Rot and Transit Rot and their Control

A Report on Consignments of Peaches sent from the Goulburn Valley to the Sydney Market.

(By S. Fish, M.Agr.Sc., Plant Research Laboratory, Department of Agriculture, in Victorian "Journal of Agriculture.")

Economic Importance of the Problem.

THE Sydney market received from some 400 Goulburn Valley growers, during the seasons 1924-25, 1925-26, 1926-27, approximately 250,000 cases of fruit per year, worth £100,000—the average price per case being estimated at 8/-. Over the same period, the loss due to brown and transit rots was 2/6 per case, showing a total loss per year of about £30,000.

In 1927-28, approximately 300,000 cases reached Sydney from the above-mentioned growers, and the loss for that year was estimated, from reliable data, around £37,000.

Examinations made at Sydney in 1928 of thirty-nine consignments from Goulburn Valley growers showed five consignments to be sound, while the remaining thirty-four consignments showed damage varying from 20 per cent. to 100 per cent. The injury was due to transit rot and to brown rot, and in some cases to both.

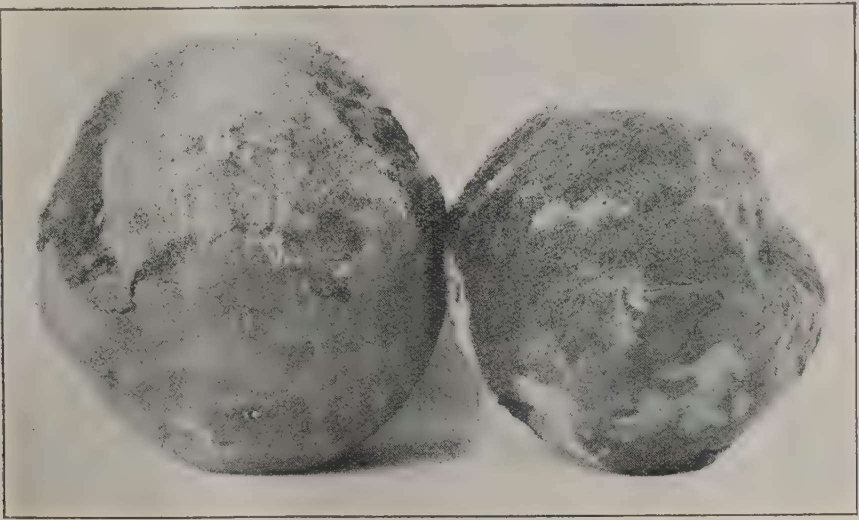


Plate 1.—Peaches Affected with Transit Rot Fungus.

Besides this severe monetary loss, the distribution of the fruit was greatly limited because buyers had become sceptical of the keeping quality of this fruit. Investigation showed that about 60 per cent. of the fruit sent to Sydney was sold to the third-class buyers, these being the second-class shopkeepers and proprietors of open stalls in the city and suburbs, who buy medium grade and slightly wasty fruit. The remainder was sold to the casual barrowman at about ninepence per case. Had this price not been accepted by the agents, such fruit would have been tipped, and for this service a debit charge of 4d. per case would have been imposed on the grower.

It was seen that

a large potential market

would exist in Sydney for Goulburn Valley fruit if these rots could be controlled. This demand would come from the first-class buyers—the country forwarding agents who require sound fruit that will carry from two to five days for the country forwarding trade. This class of buyer has largely ceased ordering owing to the difficulty of securing fruit free from the rots. Again, a demand would come from the second-class buyers—the first-class shopkeepers in the city and suburbs who buy fruit of a sound but somewhat riper condition than that required for the country forwarding trade. These buyers who, it must be remembered, draw their customers from a population of over a million, will not purchase re-conditioned fruit.

Brown and transit rots are among the factors contributing to fruit gluts in the Sydney market. Sound Peaches may be held up to

three weeks in cool store,

but fruit showing the rots cannot be profitably stored. The delivery of Peaches from the Goulburn Valley to Sydney during the Peach season normally reaches 5,000 cases on a Monday morning. In addition to this, where fruit is transferred at Albury on Sunday, a further 5,000 cases arrive on Monday afternoon. Of these 10,000 cases, those which arrive in a sound condition sell first. The wasty fruit is carried over until Wednesday, by which time another 5,000 cases have arrived.

The same conditions applying as before, it follows that a gradual accumulation of inferior fruit occurs which is eventually sold to the casual barrowman, or is finally tipped as unfit for sale. The effect of the agent's advice to growers on Wednesday results in small quantities reaching Sydney after the following Monday. The market shows an improved value on Tuesday. Agents again wire growers, with the result that large consignments again come forward.

Where the rots occur in these consignments, the position as described is repeated. Where the consignments arrive in a sound condition, agents have the alternative of cool storing any surplus as against forced sales because of a rapidly wasting article.

Cause of the Rots.

TWO FUNGI with differing characteristics are responsible for this damage. However, when considering the position over a number of years, the transit rot fungus (Rhizopus nigricans) is by far the more important. This fungus produces a soft rot, and the affected fruit "leaks." A mass of vegetative strands known to the growers as "whiskers" develops on the fruit. Some of these strands have small, round, black bodies at their tip; such bodies contain the spores of the fungus. (See Plate 1.)

Brown rot fungus (Sclerotinia americana) is common in certain years, particularly in consignments of fruit from those orchards where brown rot has established itself in the trees. This is a firm rot. The affected tissue turns brown, and tufts of ash grey spores develop on the surface of this brown area. Fruit affected with the rot does not leak. (See Plate 2.)

Sources of Infection.

By exposure of Petri dishes containing sterile media, the sources of infection of transit rot fungus were examined. Such dishes, after exposure, were placed in an incubator at 25 deg. C. in order to develop the fungus. A culture of the fungus was obtained from—

(1) Surface of a sound Peach while still on the tree.
(2) Dust in the picking bags.
(3) Dust in the picking boxes.
(4) Atmosphere of the packing shed.
(5) New cases where stacked in contaminated sheds.
(6) Dust on the grader.
(7) Dust from lorries.
(8) Diseased fruits.
(9) Dust from railway trucks.
(10) Atmosphere of the market.

An experiment was conducted to determine the influence of the elimination of picking bags, boxes and graders as sources of infection on transit rot development. Picking bags and boxes were boiled for three minutes, and the grader thoroughly washed down with 10 per cent. bluestone solution. Eighteen new cases were handled in the ordinary way; subsequently, the picking bags, picking boxes and the grader were treated as described, and fifteen more cases were packed. In both lots, the greatest care in handling was taken.

In Sydney, it was found that 7 out of 18 ordinarily treated cases—38 per cent.—and 3 out of 15 cases—20 per cent.—of the specially treated cases, were affected by transit rot. The treatment mentioned had apparently lessened the amount of transit rot, but had not eliminated it.

The sources of the brown rot spores in the Goulburn Valley are diseased fruit, leaves and twigs (see plate 5), such spores being blown by the wind. Cultures of this fungus have been obtained from the atmosphere of orchards in which the disease was present. Cultures of brown rot fungus were obtained from the surface of a sound but unripe Peach while on the tree. Spores are spread also by pickers and by the grader, owing to occasional diseased fruit being picked and not being discovered until seen on the grader.

Orchard Spraying in Relation to the Development of Brown and Transit Rots During Transport.

Work along these lines has been carried out by Drs. C. Brooks and D. F. Fisher*, which showed that fruit which came from sprayed trees developed less brown rot in transport than did fruit from unsprayed trees, while transit rot was not affected by spraying.

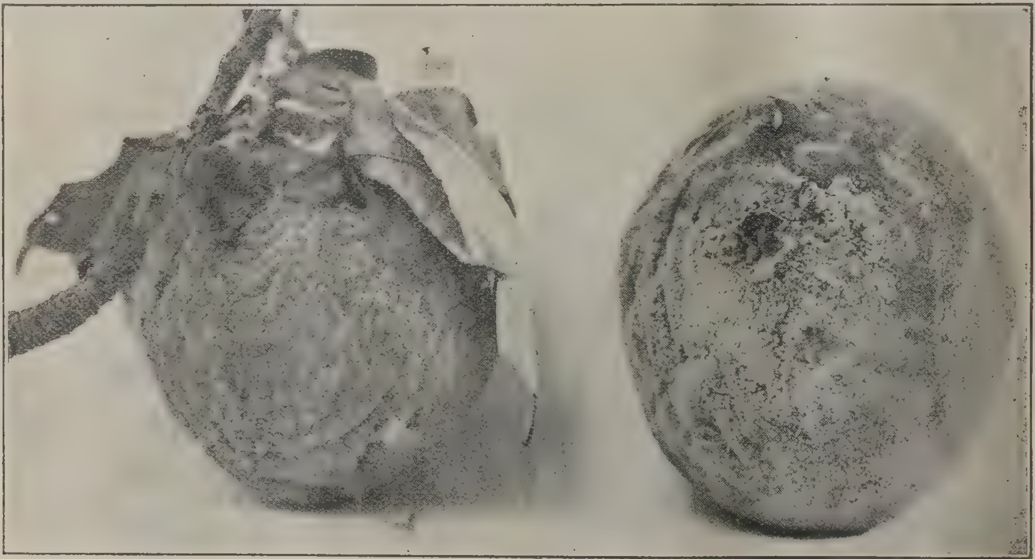


Plate 2.—Peaches Affected with Brown Rot Fungus.

Graph No. 1 is taken from the paper presented by Brooks and Fisher.

Graph No. 2 shows the result that was obtained when 200 Pullars Cling Peaches from unsprayed trees and 200 of the same variety from lime sulphur sprayed trees were sent to Melbourne. This, although a single experiment, showed a similar result to that obtained by Brooks and Fisher.

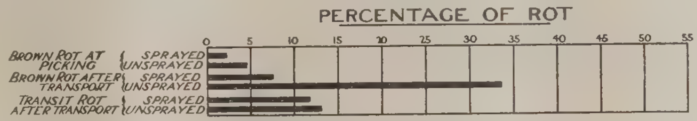
Factors Favoring Infection.

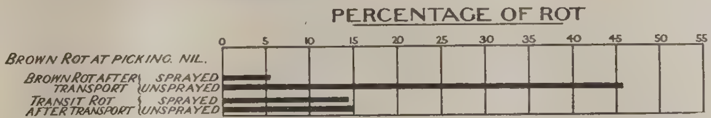
(a) Fruit Injury.

WORK by Brooks and Cooley† shows that the transit rot fungus seldom, if ever, penetrates a sound Peach, and it is the opinion of these writers that the unbroken skin of a Peach furnishes a complete protection against this fungus except where a sound Peach is in close contact with one that is already decayed.

In an experiment carried out with Peaches from the Goulburn Valley, circles were drawn on the surface of the fruit, and in some instances, a needle pierce was made in the centre of these circles about 1 mm. deep. Spores and vegetative portions of fungus were placed in the injuries made, while in other instances, the spores and vegetative portions of the fungus were placed in the centre of the circles on the apparently uninjured surfaces. The Peaches were then placed under humid conditions and held at 73 deg. F. In 98 hours, those which had been pierced were completely covered with transit rot fungus, whereas the uninjured Peaches were quite sound.

With brown rot it is generally recognised that no injury of the skin is necessary for the infection. In an experiment carried out on this point, circles were drawn on the surface of Peaches and spores of brown rot fungus were introduced into needle pierces of 1 mm. deep in the centre of the circles. Spores were then placed on the apparently uninjured surfaces in the centre of the other circles. The Peaches were then held under humid conditions at 73 deg. F. Within 24 hours, the pierced inoculations showed infection, and it took 70 hours for the Peaches on whose uninjured surfaces spores had been placed, to show development to the same extent.





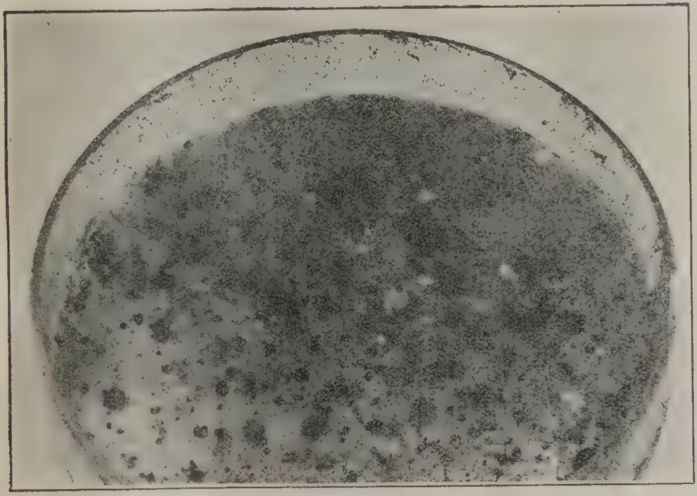


Plate 3.

A Petri dish containing sterile media was exposed in an inverted picking box for five seconds after the box had been given a slight knock to dislodge the dust. The dish was then placed in an incubator, and the Transit Rot fungus developed. Note the small black fruiting bodies.

From this it appears that transit rot fungus requires an injury in the skin of the Peach for infection, whereas brown rot fungus does not require an injury, but infection is certainly favored if an injury is present.

During examination at the Sydney market of growers' consignments, it was repeatedly observed that many transit rot "nests" occurred at the corner of the case. The cases have a rough hardwood partition, and are papered one way, thus exposing four faces of rough board. Where fruit is not packed tightly, shaking, incidental to the 500 miles of travel, has the effect of injuring the fruit in contact with these rough surfaces, thus supplying one of the favorable factors for infection.

(b) Weather Conditions.

The severity and the incidence of brown rot depend largely on weather conditions. In a dry season, it may be expected that a crop will remain free from this disease, but a series of cloudy days followed by frequent showers, especially at picking time, appears to greatly favor the development of the fungus. Transit rot in Peaches is generally very severe in seasons where heavy rains fall immediately after the final irrigation before picking, has been given.

(c) Temperature.

Up till now, the ordinary iron Louvre truck has been used in shipping fruit from the Goulburn Valley to Sydney. In the course of an experiment, temperatures were taken at different points in a load of Peaches which was sent in an iron truck to Sydney.

			Deg. F.
Before loading	(av. of 5 readings	84deg. F.) ..	75—90
During transit	(av. maximum	90deg. F.) ..	84—94
	minimum	64deg. F. ..	58—69
	mean	77deg. F.	

It is usually four days or longer from the time the fruit is picked until it is sold in Sydney.

Work by Brooks and Cooley‡ showed that a temperature of 50 deg. F. has held brown rot in check for two days, and transit rot in check for three days. A temperature of 45.5 deg. F. has held brown rot in check for three days, and transit rot in check for six days or more. A temperature of 41 deg. F. has held brown rot entirely in check for four days, and 36.5 deg. F. has held it in check for six days. It was thus seen that, by low temperatures, transit rot development could be inhibited to a relatively greater extent than could brown rot development.

In an experiment carried out with Stalley Peaches from the Goulburn Valley, it was shown that fruits inoculated with brown rot spores and held in saturated atmospheres at temperatures of 32 deg. F., 34 deg. F., 36 deg. F., 38 deg. F., 40 deg. F., and 71 deg. F., took 17 days to develop to a spot 1 cm. in diameter at 32 deg. F., 11½ days to develop to the same extent at 34 deg. F., 11 days at 36 deg. F., 7 days at 38 deg. F., 6 days at 40 deg. F., and 1 day at 71 deg. F.

In a similar experiment carried out with fruits inoculated with the transit rot fungus, placed in a saturated atmosphere, and held at 32 deg. F., 34 deg. F., 36 deg. F., 38 deg. F., 40 deg. F., and 74 deg. F., no development took place, even after 17 days, in those Peaches held at temperatures from 32 deg—40 deg. F., whereas at 74 deg. F., all Peaches were severely affected in 93 hours.

This experiment gave a similar conclusion to that deduced from the work of Brooks and Fisher, namely, that low temperatures depress the development of transit rot to a relatively greater extent than do such temperatures in the case of brown rot.

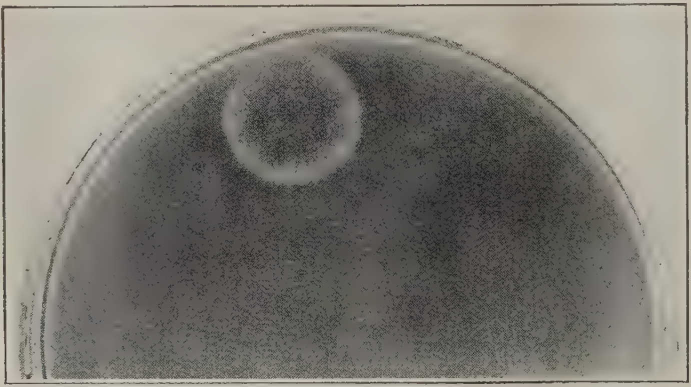


Plate 4.

The picking box referred to in the explanation of Plate 3 was placed for one minute in water of a temperature of 100deg. C. It was then inverted, and allowed to dry, after which it was given a knock to dislodge the dust. A Petri dish containing sterile media was then exposed in this dust for five seconds, and was placed in an incubator where Transit Rot fungus failed to develop, although the conditions were known to be favorable to its development.

Pre-cooled and Ice Truck Consignments Sent to Sydney from the Goulburn Valley.

IN DECEMBER, 1927, the Shepparton growers were induced to pre-cool 492 cases of Hale's Peaches intended for the Sydney market. These Peaches were held in the cool chambers of the Shepparton Cannery for four days at a temperature of 35 deg. F. They were then put into trucks that had been pre-iced for half an hour before receiving the fruit. This consignment was sent to Albury, where the fruit was loaded into a New South Wales refrigerator car which had been pre-iced for thirteen hours. The fruit was sent to Sydney, and a thermographic record was obtained by Mr. O. Barr, of the New South Wales Railways.

The temperature conditions were as follows:—61 deg.—63 deg. F. at the Shepparton loading; these temperatures fell to 53 deg.—56 deg. F., and did not rise beyond that point until Albury was reached. In the New South Wales car, the temperature at Albury was 56 deg. F., and the roof temperature gradually rose to 63 deg. F., and the floor temperature dropped to 50 deg. F. during the journey to Sydney. The mean daily temperatures during these two days was 68 deg. F., rising to a maximum of 80 deg. F. Examination in Sydney showed no transit rot, but 180 cases showed brown rot to some extent. According to Mr. D. G. Wills, the Sydney representative of the Goulburn Valley growers, the prices realised justified the expense.

The Ardmona Fruitgrowers' Association sent 12,112 cases of pre-cooled and ice-trucked fruit from the Goulburn Valley to Sydney during the season 1927-28. According to Sydney reports, this fruit arrived in a sound condition, and agents complimented the growers on its condition. However, in spite of this, no increased prices were obtained for this fruit over the Louvre-trucked consignments. In fact, on an average, the price was lower. Investigation into this showed that buyers, on noticing that the fruit was cool, thought that it was "carry over fruit" which had been stored in Sydney. Such fruit generally rots rapidly when taken out of the cool store, because it is generally infected by the fungi at high temperatures before being stored.

This was the main reason for the decreased prices, and serves to illustrate the lack of confidence which existed among buyers of Goulburn Valley fruit.

The Ardmona fruitgrowers were further induced in 1928-29 to send

22,172 cases of pre-cooled fruit

to Albury in iced trucks, and thence to Sydney in Louvre trucks. They were forwarded to Sydney mainly in these trucks because the New South Wales Railway Department increased the freight 50 per cent. for the use of the ice trucks.

Although these consignments were all sound, a number of them did not bring increased prices. It was seen that besides, in many cases, mistaking this fruit for "carry over," a number of consignments of the cooled fruit were mixed up on agents' stalls with uncooled fruit, and buyers were just as sceptical of this fruit as of the uncooled fruit, not realising the different treatment it had received.

These were among some of the difficulties met with in an attempt to demonstrate

the economic soundness

of pre-cooling and ice-trucking as a means of controlling the transit rots. The buyers who have in the past been sceptical about operating on Goulburn Valley fruit are now commencing to look for and to buy this cooled fruit with confidence, and this will increase with the development of cooling.

It is pleasing to note that many country forwarding agents are now operating with success on cooled fruit. Among the 1928-29 consignments from Ardmona, 125 cases of Zerbe Peaches were sent across to Sydney from an Ardmona grower. Of these, 100 cases were pre-cooled and sent to Albury in iced trucks, and thence to Sydney in Louvre trucks. On the same train, the 25 remaining cases of Peaches from the same orchard at a similar stage of ripeness were sent to Sydney in a Louvre truck as a check consignment. On arrival in Sydney, the uncooled fruit showed over-ripeness and rot development, while the cool fruit was perfectly sound.

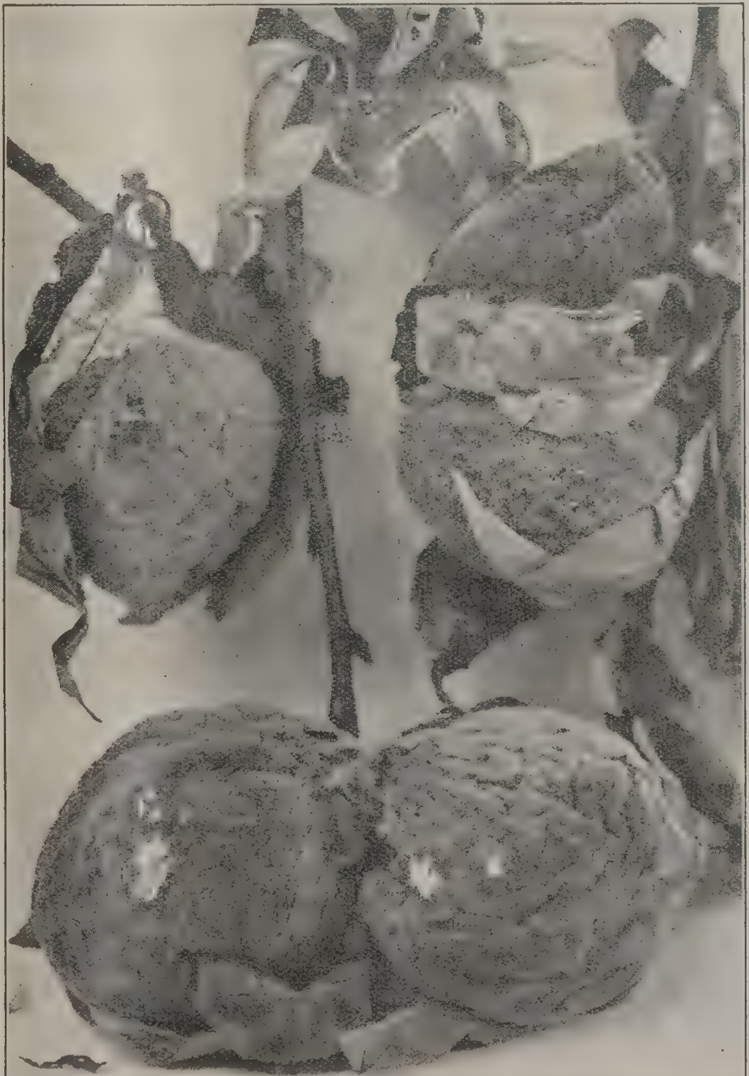


Plate 5.—Showing fruit, leaf and twig infection of Peach by Brown Rot fungus.

A detailed comparison of the prices obtained for this fruit is as follows:—

Pre-cooled and Ice Trucked to Albury and thence to Sydney in Louvre Truck.

No. of Cases.	Grade.	Price per Case. s.	d.
1	Extra choice	14	0
8	Choice	14	0
24	A grade	13	0
15	B grade	12	0
16	B grade	11	0
19	C grade	10	0
17	C grade	9	0
100 cases			

Uncooled Fruit in Louvre Truck.

No. of Cases.	Grade.	Price per Case. s.	d.
1	Extra choice	7	0
2	Choice	7	0
1	Choice	6	0
1	Choice	5	0
3	A grade	7	0
2	A grade	6	6
1	A grade	5	0
4	B grade	7	0
2	B grade	6	6
1	B grade	6	0
5	C grade	7	0
2	C grade	5	0
25 cases			

These data are most convincing, but it should not be concluded that every iced truck consignment would bring such an advance over Louvre consignments, because the incidence of rots and over-ripeness depends to a very large extent on weather conditions just before and during transport of the fruit. However, it can be seen that the practice will eliminate chance, and establish the confidence of the buyers. It is quite obvious that this stage, where less than 1 per cent. of the fruit sent to Sydney from Goulburn Valley growers is pre-cooled and ice-trucked, is the vital one in the establishment of the practice in Victoria, and every facility should be given Goulburn Valley growers to get this well developed on a permanent commercial basis.

The Ardmona growers use the cool-store attached to the Ardmona Cannery for pre-cooling the fruit. The cannery authorities organise and despatch the cool consignments.

At Shepparton, the growers have arranged with the owners of the

Shepparton Freezing Works

to convert this into a cooler for pre-cooling fruit. This is now partially converted, and when completed, will have approximately 50,000 case capacity. Already, this season, a number of ice-truck consignments have been despatched to Sydney from this place. The organisation of the consignments is carried out by representatives of the owners of the cooler, and a commercial representative appointed by the growers.

Satisfactory commercial arrangements have been made by the growers with both the above organisations for the work performed.

* * *

In connection with this investigation, I wish to acknowledge the co-operation and assistance of the Ardmona and Shepparton Fruitgrowers' Associations, the Ardmona and Shepparton Cannery authorities, Mr. D. G. Wills, the Sydney representative of the Goulburn Valley growers, and the New South Wales and Victorian Railways, all of whom have played an important part in bringing about this new development.

References to Literature.

* Brooks and Fisher, Journal of Agricultural Research, Vol. XXII., 1921, 477.

† Brooks and Cooley, Journal of Agricultural Research, Vol. XXVII., 1928, No. 9, 516.

‡ Brooks and Cooley, Journal of Agricultural Research, Vol. XXII., 1921, 465.

The foregoing article and illustrations are reproduced by courtesy of the Victorian Journal of Agriculture.

FRUIT PRE-COOLING SUCCESSFUL.

Mr. D. G. Wills, Sydney representative of the Northern Victorian Fruitgrowers' Association, advises as follows regarding soft fruits sent to Sydney:—

The fruit arriving under the pre-cooling system has been very satisfactory, particularly in respect to the early Peaches.

One variety of early Apricots which were held in cool store in Shepparton and Mooroopna for a longer period than forty-eight hours, were not so satisfactory, but this was entirely due to inherent vice; in other words, this variety of Apricots, namely, Moorpark, are not suitable for forwarding any distance, and have always been troublesome when sent to Sydney market. With this exception the consignments forwarded have been entirely satisfactory and agents generally are keenly anxious to see this method of transport extended.

It is the intention of certain Shepparton growers to try an experimental consignment of Peaches and Pears to Brisbane in the near future, and I will have pleasure in acquainting you with the results.

PERSONAL.

Mr. Stephen Thompson, Senr., President of the Merbein Ohanez Growers' Association, was congratulated on his restoration to health at the meeting of the Association, held on January 16.

Mr. Chris. Lawrey, a well-known fruitgrower of Diamond Creek, Vic., and one of the former presidents of the Victorian Fruitgrowers' Central Association, recently joined the staff of the Victorian Department of Agriculture, and is rendering appreciated service as a fruit inspector.

Mr. H. G. Colombie, who for years has represented in Australia a group of the leading fruit brokers of Great Britain and the Continent, is returning to England to observe the sale of Australian fruit in the forthcoming export season.

Mr. Colombie rendered good service in launching the Victorian Fruit Marketing Association, of which he is the first president. He also assisted largely in the formation of the South Australian Fruit Marketing Association.

To be happy is not only to be freed from the pains of diseases of the body, but from anxiety and vexation of spirit; not only to enjoy the pleasures of sense, but peace of conscience and tranquility of mind.—John Tillotson.

Packing Apples in the Standard (Canadian) Case.

(18 in. x 11½ in. x 10½ in. Inside Measurement.)

The Steady Improvement in the Australian Fruit Pack is a Matter for Congratulation

The beginner is advised, when packing Jonathans or other round-shaped varieties, to try first of all the packs marked *, adopting the others as circumstances make them desirable.

The diameter of an Apple is measured from "cheek" to "cheek" not from stem to eye, therefore for purposes of this chart, all Apples measuring 2¼ inches in diameter and including all other Apples over this size and up to, but not 2½ inches, are called 2¼ inches, and so on with the other sizes.

Apples of similar size may be packed in various ways. The pack to be adopted should depend on whether the variety is "long," "flat," or "medium-shaped," and whether the Apples have been selected as large or small of their particular size, such as large 2½ inch or small 2½ inch, etc.

Adopt 3-3 packs in prefernce to 3-2 packs for sizes smaller than the 175 count.

Some sizes must be packed more tightly, and others more loosely than usual to attain the "correct" height. The illustrations show the method of placing the Apples to spread them evenly, yet to fit firmly, should the size demand that they be packed **more loosely than usual.**

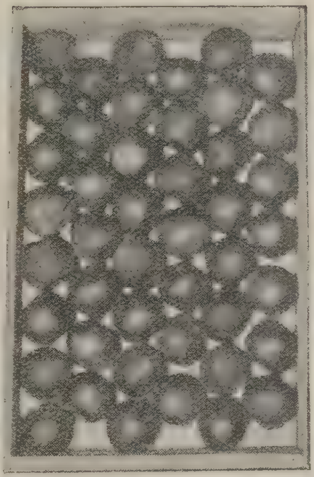
Counts from 72 to 113 inclusive, are not recommended to Apples intended for export.

Knowing the **number of layers** packed in the case, **counting the top** rows, and **referring to the table,** the packer can tell at a glance the actual number of fruit contained in the case. The **marking number** for that pack should then be placed on the case.

REMEMBER.

1. The **second** and **alternate** layers in each pack must **not** rest directly on top of the fruit beneath, but **in the spaces.** Keep each Apple **over the pocket** formed by the layer beneath.
2. It is the **size of the pockets** or spaces that regulates the **height of the fruit.** The height of the fruit is controlled by the tightness of the layer.
3. **Correct placing of the first layer** is the most important factor in securing **correct height.**

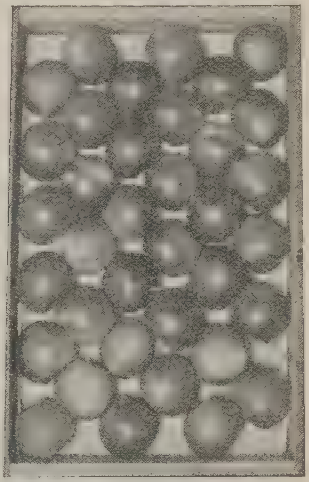
2¼-inch. 225 Count.



3-3 pack, 8 x 7 layer, 5 layers in the case. Total, 225 Apples.

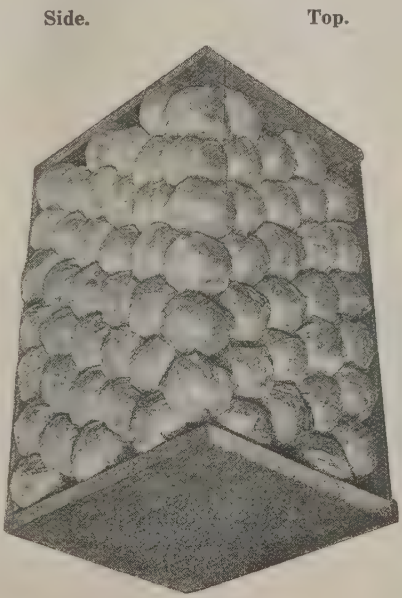
Note angles at which Apples are placed compared with those packed more loosely than usual.

2½-inch. 180 Count.

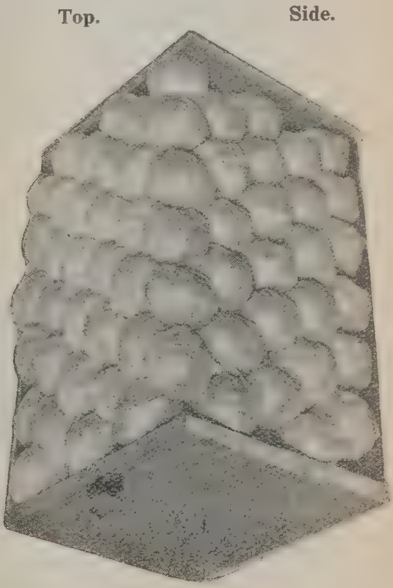


3-3 pack, 6 x 6 layer, 5 layers in the case. Total, 180 Apples.

Note angles at which Apples are placed compared with those packed more loosely than usual.



Finished case, 225 count, showing top and side view.



Finished case, 180 count, showing top and side view.

4. All **Apples should be placed on the cheek**, producing an even, but not necessarily a level, surface on each layer (see illustrations).
5. **No two fruits rest directly on top of each other** in any direction (see illustrations of packed cases).
6. Sizing and packing should be treated as two separate operations.
7. The **diameter of an Apple** is measured from cheek to cheek, **not** from stem to eye.
8. If your **cleats** show a tendency to **split** when nailing, drop them into a bucket of water for a few minutes.
9. **Lining paper** is **not** required in cases intended for export. It prevents **free circulation** of air.
10. **Wire-tie** all softwood cases to prevent **breakage** and **ullage** in transit.
11. Rest your wire-tying machine on the side and not on the "bulge" of the case.
12. Keep the **tie wires close up** to the cleats and **avoid pressure** directly over the fruit.
13. **Fewer Apples touch wood** in the standard case than in the dump case.
14. Stencil or label cases true to name, **quality, number**, and **size.**
15. From orchard to shed, at every step **handle Apples with great** care.
16. **Don't nail down** on the bare floor; place battens beneath, or use a "press"
17. Do not walk or sit on packed cases; cases so used may possibly be opened by the agent as a sample of **the whole consignment.**
18. Make cases **uniform, neat, attractive, inviting.**
19. **Establish a reputation** for your fruit. Attention to details pays handsomely.
20. **Slack Packing** results in **bruised fruit.**
21. **For soft-wood cases, cement-coated nails** are preferable to the ordinary type.
22. A retailer purchasing a case of Apples with a number of inferior specimens included, is compelled to raise the price on the remainder to secure his profit, the increase in price to the consumer tends to decrease consumption, therefore, it is a decided advantage to pack true to grade.
23. **Stack cases on their sides; not on the "bulge."**

Timber required to make the standard case, inside measurements, 18 in. x 11½ in. x 10½ in.:—

Two ends, one piece each, 11½ x 10½ x ¾.

Two sides, one piece each, 19½ x 10½ x 5/16.

Top and bottom, two pieces each, 19½ x 5¼ x 3/16.

Four cleats, one each end top and bottom, 11 x ¾ x ⅜.

Important. — These specifications should not be varied in the slightest particulars.

It requires 32 nails to make a standard case, and 60 nails to make a "dump" case.

Handle fruit as carefully as eggs.

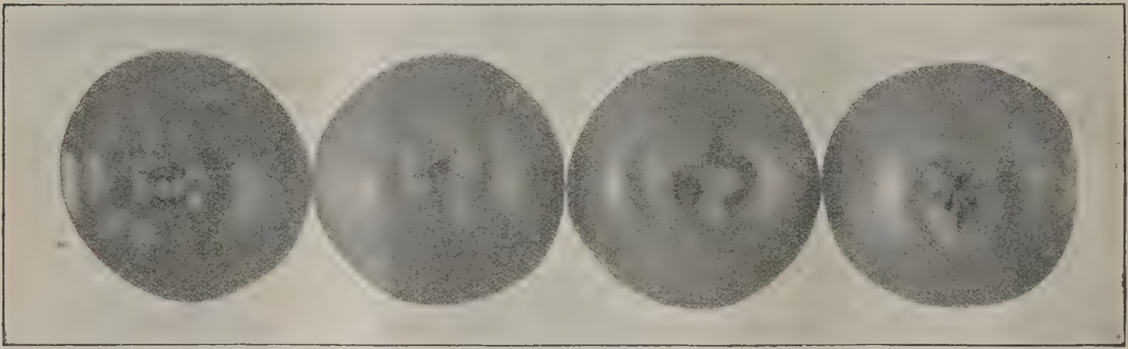


Fig. 1.

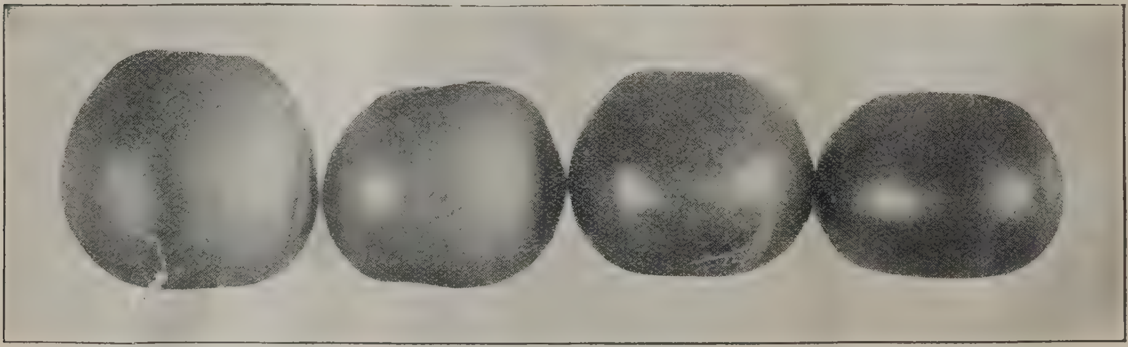
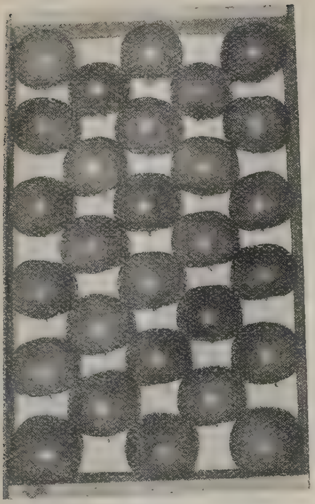


Fig. 2.

Fig. 1 shows evenness of four 2½-inch Apples when placed on cheek.
Fig. 2 shows unevenness of the same specimens placed on the flat (stalks down.
Thus it will be seen that packing on the cheek will produce a more even surface on each layer.

2⅝-inch, 138 Count.



3-2 pack, 6 x 5 layer, 5 layers in the case. Total, 138 Apples.

Note.—Pack looser than usual. This illustration shows how the Apples should be placed to do this.

Diameter of Apple.	Name of Pack.	Description of Layer.	No. of Layers.	Total.	Remarks.
2⅛ in.	3-3	9 x 8	5	255	Pack more tightly than usual
2⅛ in.	3-3	7 x 7	6	252	Pack more loosely than usual
2⅛ in.	3-3	8 x 8	5	240	
2⅛ in.	3-3	7 x 6	6	234	Pack more loosely than usual
2¼ in.	3-3	8 x 7	5	225*	245 count in "dump" case
2¼ in.	3-3	7 x 7	5	210*	228 count in "dump" case
2¼ in.	3-3	6 x 6	6	216	Pack more loosely than usual
2¼ in.	3-2	8 x 8	5	200	Pack more tightly than usual
2¼ in.	3-3	6 x 5	6	198*	Pack more loosely than usual
2¼ in.	3-3	7 x 6	5	195*	210 count in "dump" case
2¼ in.	3-2	8 x 7	5	188	Pack more tightly than usual. 193 count in "dump" case
2⅜ in.	3-3	6 x 6	5	180*	193 count in "dump" case
2⅜ in.	3-2	7 x 7	5	175*	Pack more loosely than usual. 175 count in "dump" case
2⅜ in.	3-3	6 x 5	5	165*	
2½ in.	3-2	7 x 6	5	163	
2½ in.	3-3	5 x 5	5	150*	Pack more loosely than usual
2½ in.	3-2	6 x 6	5	150	168 count in "dump" case
2⅝ in.	3-2	6 x 5	5	138*	Pack more loosely than usual. 156 in "dump" case
2¾ in.	3-2	5 x 5	5	125*	Pack more loosely than usual. 132-144 in "dump" case
2¾ in.	3-2	6 x 6	4	120*	120-132 count in "dump" case
3 in.	3-2	5 x 4	5	113	Pack more loosely than usual
3 in.	3-2	6 x 5	4	110*	
3 in.	2-2	7 x 6	4	104	Pack more tightly than usual
3 in.	3-2	5 x 5	4	100*	108 count in "dump" case
3 in.	2-2	6 x 6	4	96	Pack more tightly than usual
3¼ in.	3-2	5 x 4	4	90	
3¼ in.	2-2	6 x 5	4	88	
3¼ in.	2-2	5 x 5	4	80	
3¼ in.	2-2	5 x 4	4	72	Pack more loosely than usual
3½ in.	2-2	4 x 4	4	64	Pack more loosely than usual
3½ in.	2-2	4 x 3	4	56	Pack more loosely than usual

ACKNOWLEDGMENT.

The information and illustrations regarding Apple and Orange packing have been kindly made available by the Victorian Department of Agriculture. The illustrations are from the excellent wall-sheet packing charts issued by the Department.

AUSTRALIAN FRUIT EXPORT.

Pinewood Cases Recommended.

INTERESTING COMMENTS regarding case material for Australian fruit is contained in a letter received by a correspondent from Messrs. Geo. Monro Pty. Ltd., the well-known fruit salesmen, Covent Garden, London. The firm writes:—

"With regard to cases, we find that a clean, white, pinewood case does assist in the sale of fruit. The fruit is not so bruised as the case 'gives,' and consequently takes up the shrinkage of the fruit. It also looks much cleaner and nicer, and the Canadian pine box, which has been adopted by New Zealand, is undoubtedly one of the factors that has made the New Zealand Apple business such a success."

The following is an extract from a letter from the Overseas Farmers' Co-op. Association, London:

"The opinion of buyers seems to indicate that a whitewood case is preferred, but the type of case (Australian dump or Canadian) is immaterial, nevertheless there is a strong inclination towards a white pinewood case upon an economic basis, as the tare of this box is less."

MARKETING BRITISH-GROWN FRUIT.

Improvement in Packing and Grading.

"Fruit Marketing Reform" is the subject of a Bulletin (No. 7) issued by the Ministry of Agriculture and Fisheries, London. This Bulletin states that the need for reform in the methods of home-grown fruit has long been recognised. It has increased with the growing intensity of the competition of imported fruit, particularly Apples. Imported Apples are almost invariably standardised as to grade and package. The market is in bulk, and has the advantage of regularity and continuity of supply.

Recognising that English-grown fruit is of high quality and flavor, efforts are being made to improve the grading and packing, hence a series of bulletins have been issued on this subject.

Bulletin No. 7, referred to, includes the grade designation of Pears and Apples, also the standard methods of packing, the grades being classified into Extra Fancy, Fancy, and "C" grade. Dimensions of packages are also given.

AUSTRALIAN CONFERENCE OF FRUITGROWERS.

Mr. J. B. Randell, of Gumeracha, S.A., who has on several occasions attended as a delegate the several Interstate Fruitgrowers' Conferences, writes as follows under date October 21:—

"I am pleased to see through the 'Fruit World' that the Interstate Conference of Fruitgrowers is to be resuscitated. I hope the fixture for May next at Hobart will be a great success."

Health Week.

Health Week was celebrated in Melbourne in mid-November. This would have provided an excellent opportunity for fruitgrowers to have concentrated their propaganda of the value of fruit diet. It is to be hoped that the growers will speedily organise so as to accept every opportunity for impressing on the public the importance of fruit on health.

Citrus Growers' Convention.

Mildura, February 4th to 7th. A Big Programme.

THE AUSTRALIAN CITRUS GROWERS' CONVENTION to be held at Mildura from February 4 to 7 promises to be an important function.

Three days will be taken up with addresses on various phases of citrus culture, and at the conclusion the annual conference of the V.C.C.A. will be held.

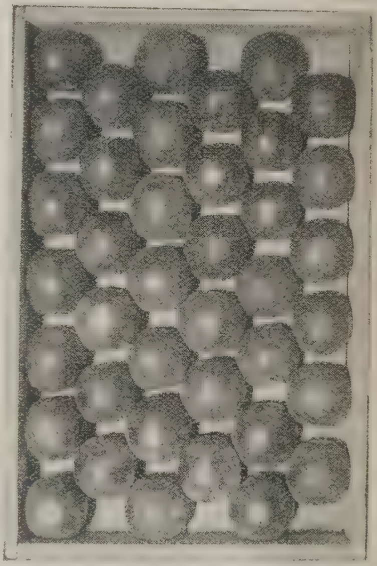
Among the items for the V.C.C.A. agenda, the Murrabit Association's proposals for the re-organisation of the V.C.C.A., copies of which were forwarded to all Associations, following the decision of the special Conference last October, to refer the proposals to the next annual V.C.C.A. Conference.

The programme of speakers and addresses includes Professor J. A. Prescott, Professor of Agricultural Chemistry of the Waite Agricultural Research Institute, South Australia, on "Soil Research in Relation to the Citrus Industry"; Dr. W. J. Young, Chairman of the Citrus Research Committee, of the Council for Scientific and Industrial Research, on the work of the Committee; Mr. Frank M. Read, M.Agr.Sc., horticulture research, Victoria, officer on "Citrus Preservation Methods"; Mr. Eric S. West, of Griffith, on the work in progress at the Griffith Research Station; Mr. S. A. Cock, Victorian Government Citriculturist, on "Citrus Bud Selection" and on "Pruning"; and Mr. G. E. Kitchin-Kerr, Melbourne Market Representative, on "The Principles and Practice of Citrus Marketing." The Convention will also be addressed by Mr. H. W. Clapp, Chairman of the Victorian Railways Commissioners, and Mr. W. Cattanach, C.M.G., Chairman of the State Rivers and Water Supply Commission. A get-together smoke social has been arranged for the second day of the Convention, Wednesday, February 5.

The blocks to be visited during the first three days of the Convention include those of Messrs. W. L. Wilkinson, Red Cliffs; N. W. Newton, C. G. Whiteley, N. B. Roberts, Leng Bros., Irymple; Captain D. B. Halhed, and Mr. H. O. Symons, Merbein; and of E. L. Page at Curlwaa. At Captain Halhed's block, demonstrations of the latest implements for orchard use will be seen; these implements include

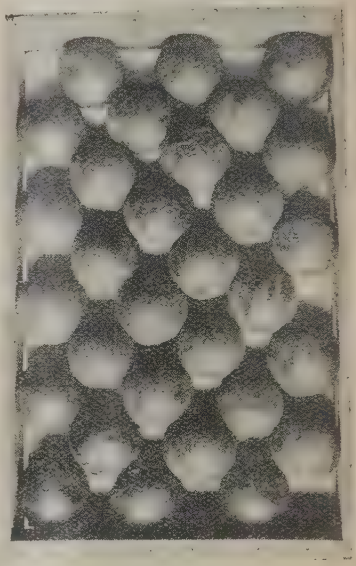
PACKING ORANGES.

2¼-inch (small). 234 Count.

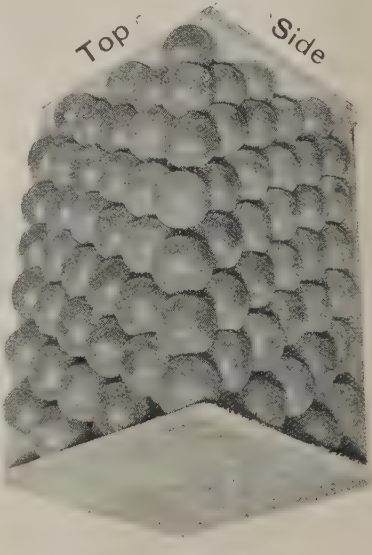


3-3 pack. 7 x 6 layer. 6 layers in the case. Total, 234 Oranges.

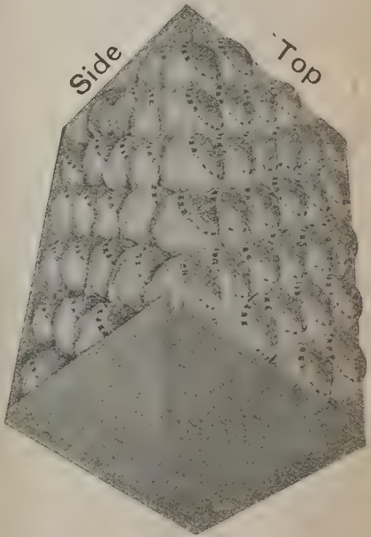
2½-inch (medium). 150 Count.



3-3 pack. 5 x 5 layer. 5 layers in the case. Total, 150 Oranges.



Finished case (234 count), showing top and side view.



Finished case (150 count), showing top and side view.

the Simar Rototiller, Harvey orchard implements, tractor appliances and power lifts, and subsoilers. A fumigation demonstration will be held on a conveniently situated block by Mr. Cock and his assistants, and there will also be a demonstration of the Phoenix artificial rain machine. The packing sheds to be visited include the Curlwaa Co-operative Society's and the Red Cliffs Co-operative Company's and at the Curlwaa shed Mr. Basil Krone, the packing expert of the Victorian Department of Agriculture, will show Orange packing methods.

The Chairman of Directors of the V.C.C.A., Mr. A. W. Schwennesen, who initiated the Convention, points out that by holding the Conference at country centres growers will get to know each other better, and it is hoped that the success of the Mildura Convention will warrant the continuance of this method.

FRUIT FLY IN FLORIDA.

A HELPFUL REVIEW of the fruit fly situation in Florida is given in the November "Citrus Leaves," by Prof. Harold Hume, of the Horticulture and Botanical Department of the University of Florida —one of the outstanding men of the industry.

Prof. Hume traces the perpetual warfare of man against pests, then after dealing with the characteristics of the fruit fly and methods of control, he continues:—

"There is one fact which I desire to bring home to you with all the emphasis possible.—That just so long as the Mediterranean fruit fly remains in Florida there will be restrictions upon crop production and crop movement."

Prof. Hume then deals with the reactions of human nature—the "know-all" who says that the fruit fly has been in Florida for thirty years: the man who says it was never there at all, and it was a scare to put and keep men in jobs—also the grower who confronts the inspector with a shot-gun!

Prof. Hume asks frankly—"Can the fruit fly be eradicated from Florida?"—and without hesitation the answer is "Yes."

Despite all difficulties, there has been wonderful co-operation on the part of all concerned to rid the State of this dreadful scourge. This co-operation must be continued, also sufficient funds must be provided to win through.

The statement concludes thus:—

"We will win out; in this I have the utmost confidence. Someone has said to me, 'Why do you think the Mediterranean fruit fly can be eradicated? This insect has gone into countries and has stayed there as an everlasting tax upon the horticultural activities of the people.' Why do I believe it can be taken out of Florida? I believe it can be done because of the progress already made. Flies were once very abundant; now they are extremely difficult to find, though without doubt they are present still in small numbers. The methods applied for extermination have been successful in a large measure, and all that we have to do is to keep going along the same lines and success will follow. Furthermore, I believe that the job will be finished because never before, anywhere on this earth, has this insect met a bunch of red-blooded Americans."

CITRUS IN U.S.A.

M.O.D. Has Successful Year.

THE Mutual Orange Distributors' a co-operative association of Californian citrus growers, had a successful season in their 1928-29 operations. Their report, presented by Mr. C. P. Earley, the General Manager, and published in "Citrus Leaves," stated the aggregate turn-over for the year was £2,621,000, the M.O.D. having shipped 3,994,000 cases of citrus fruits at an average cost of 11.3 cents per packed box, which costs include all expenses of every kind.

The Association has rebated to its growers the total sum of over £40,000, or an average of 2⅝ pence per packed box, of which sum £16,400 represented the rebate for shook purchases made through their supply department.

An advertising programme was conducted as follows:—Newspaper and magazine news, display and feature material; bill-board and similar out-of-door advertising; radio programmes, and dealer's service, including the distribution and use of posters, stringers, pedestals and similar materials.

The Association conducts a legal service open to all members. It is estimated that growers have been saved many thousands of dollars through this service. Income tax and similar matters are handled through this Department.

The Mutual Orange Distributors attend to the collection of claims. They conduct a field and service department.

The Brogdex system is favored, the season just finished having practically no decay in any of the Oranges. Such decay as noticeable in Lemons was believed to be due to interior breakdown.

In conclusion, two matters are deemed vital. One, the duty which a co-operative organisation owes to the growers, and secondly, the right of the grower to select his own marketing body.

The M.O.D., which has been established for 25 years, maintains a competitive status in the co-operative marketing of California citrus fruits.

HORTICULTURAL RESEARCH

AN IMPORTANT CONFERENCE of horticultural experts was held at Mildura in November, under the auspices of the Advisory of the Griffith and Merbein Research Stations. This was the second conference of this nature, and the next one is due to be held in November, 1930, at Griffith, N.S.W.

At the Mildura Conference, delegates attended as follows:—Mr. J. G. Youll, manager of the Murrumbidgee irrigation areas; Mr. F. K. Watson, M.B.Sc., Water Conservation and Irrigation Commission of N.S.W.; Mr. H. J. Braund and Mr. E. R. Iredale; Mr. J. S. Vagg, Griffith Pro-

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ducers' Co-op. Company; M. P. Rutledge, Yenda Producers' Co-op. Company; Mr. V. C. Williams, Mr. A. G. Kubank and Mr. Eric West, Officer-in-charge Commonwealth Research Station, Griffith, N.S.W.; Mr. C. G. Savage, Director of Fruit Culture, Department of Agriculture, N.S.W.; Mr. Geo. Quinn, Chief of Horticultural Division, Department of Agriculture, South Australia; Mr. F. Read, Research Officer, Department of Agriculture, Victoria; Mr. H. Wagstaffe, Manager Curlwaa and Coomealla irrigation areas and Mr. W. McCutcheon, District Fruit Expert, Curlwaa.

District representation included the members of the Advisory Committee of the Commonwealth Research Station, Merbein; the First Mildura Irrigation Trust, the Department of Agriculture, Victoria, and the staff of the Commonwealth Research Station.

Mr. Eric S. West gave details of the research work at Griffith in relation to manuring, irrigation and frost prevention.

Mr. A. V. Lyon, M.Sc., explained the work of the Merbein Experiment Station. Mr. J. E. Thomas, B.Agr.Sc. (soils and salt), Mr. C. Barnard, M.Sc., Botanist, gave details of the fruit bud and root system of the Sultana. Other items at the conference dealt with were: Setting of Valencia Oranges; Fertilisers for Grape vines in irrigation areas; Blood and bone fertilisers for deciduous trees, with special reference to quantity and quality of Apricot, Peach and Prune crops; The sulphuring of Apricots; Recent changes in methods of drying Grapes and control of dried fruit pests; Soil surveys; Irrigation practice in community irrigation settlements; The suitability of Mallee lands for horticultural plants; Experimental plots for additional products in irrigation areas.

Mr. C. G. Savage reviewed the New South Wales Department's activities in relation to bud selection. Mr. F. Read gave particulars of the results of experimental work in reclaiming salt lands in Tresco.

Soil surveys, irrigation, dried fruit pests and methods of fruitgrowing were dealt with at the conference.

Missionary (to cannibal): "What makes your chief so talkative?"

Cannibal: "Oh, he ate a couple of barbers this morning."

Western Australian Notes

(By Geo. W. Wickens, Superintendent of Horticulture.)

LAST season stone fruits were under the average; this season, in the majority or orchards there is a super-crop. Last season's Pear crop was medium; this year it is from good to heavy. The Apple crop last season constituted a record; this season it is light. The Grape crop last season was good; this season it is again a good one. The citrus crop last season was under the average, and present indications are that in the coming season the trees will yield plentifully, but it is too early yet to know what proportion of the young fruits now on the trees will shed and what remain to ripen.

To obtain the best results on the market, great care should be exercised in grading and packing so that when any case is opened up the fruit in that case will be found to be of one size and quality.

The light crop of Apples will mean a great reduction in the quantity exported compared with last season, but some shipments will be made, and it is hoped last season's experience in the bad results attending the export of immature fruit will prevent any of that description being forwarded again, either in the coming or any subsequent season.

Though the winter rainfall this year was under the average in the fruitgrowing districts, more than usual has fallen in November, and cultivation to loosen the surface and prevent loss of moisture has needed constant attention, but the rain has been very beneficial in causing the trees to make strong growth.

Fruit Fly.

The abundant crop of early Apricots will afford an excellent hopping off place for fruit flies this season, and growers should exercise the greatest care in destroying all infected fruits. All fallen fruit should be gathered up, not once or twice a week, but once in every 24 hours. By doing this and attending to baiting and trapping, the pest will be kept under control, but if neglect is shown in the early season's fruits, the pest will increase, in a heavy stone fruit season like the present, to plague form by the time the mid-season fruit is fit for market.

No trace of codlin moth has been seen in the State since January last, and there is every reason to believe that Narrogin now, as well as Collie, has been freed from the pest, but all Apple and Pear growers must remember that it may be introduced in goods from the Eastern States at any time, and the Department should be notified at once if any fruit is found showing evidence of having been tunnelled by a caterpillar. If the pest is discovered in the early stages of invasion our experience has shown that it can be, and is, completely wiped out; but it would be a long fight with a doubtful issue if codlin moth had a few seasons' start in a district before steps for its eradication were taken. Western Australia is noted for the hearty co-operation of fruitgrowers and the Department in working for the benefit of the industry, and it is only this co-operation that has enabled Western Australian Apples orchards to remain free from codlin moth.—"W.A. Journal of Agriculture."

Mr. H. J. Price, of Karragullen, visits Melbourne.

We were pleased to receive a call at the "Fruit World" office, from Mr. H. J. Price, fruitgrower, of Karragullen, W.A.

Mr. Price spoke of the heavy Apple crop in Western Australia in 1929, and the reduced crops showing for 1930. At their orchard, the principal varieties grown are Jonathans, Dunns, Cleopatras, Granny Smith, also Yates, Tasma and Dougherty.

A few years ago Rokewoods were grown largely, but these developed water core, and this variety has been replaced with Granny Smith and Yates, and 12 acres of Rokewoods were thus worked over.

Granny Smith is one of the best varieties. Trees bear wonderfully well, and the fruit carries well. From their orchard 4,000 cases were picked last season. They also have 5½ acres in Pears, mainly Williams or Bartlett, as it is termed in W.A.

Mr. Price states that West Australian growers are keen to the necessity for export. In addition to the quantities sent to United Kingdom and Continental markets, trade has been developed with Java and Singapore.

Owing to the uniform packs, it has been possible to develop a direct sales trade, and it is estimated that 60 per cent. to 70 per cent. of the exports from W.A. are sold on the f.o.b. or f.o.r. basis.

Editorial Chats

THE FEDERAL ARBITRATION COURT is sadly in disrepute. Its demise would probably be welcomed by those who purport to desire its continuance.

This unwieldy court, with its expensive trappings, has shown its utter futility in the present regrettable coal dispute. Many coal mines of New South Wales have been closed for just on a year, despite the gratuitous offer of bounties from the State and Federal Governments.

Recently the court made an interim award, granting the very scale of wages which caused the mines to close. Then the High Court, on appeal, declared the award invalid, as the Arbitration Court exceeded its jurisdiction. The next day the Arbitration Court met again and, without hearing evidence, granted the same award, and a fresh appeal to the High Court has been launched.

These academic and uneconomic awards are disturbing to the public mind. They get nowhere, meanwhile the mines remain closed and employer and employee are driven further apart.

A "court," with its contending parties, is not the place to settle industrial disputes, and a **Federal Court** operating in a country as large as the United States is hopelessly cumbersome and unwieldy. We should get as close as possible to the seat of the trouble when disputes occur, whereas the court widens the breach by creating trouble in another State in order to make the dispute "Federal," thus invoking the aid of the Federal Court.

The abolition of the Federal Arbitration would remove some of the shackles from industry and benefit both employee and employer.

. . . .

THE FEDERAL CITRUS CONVENTION meets at Mildura early this month. This is as it should be. By meeting is a country centre, growers get to know each other better, much local interest is aroused and altogether there is a better "atmosphere." The Victorian Fruitgrowers' Central Association achieved its greatest success —and much service of practical value was rendered—when its meetings were held in country districts.

The Mildura Citrus Convention bids fair to be highly successful, and to be the forerunner of further "country" conferences.

. . . .

HORTICULTURAL RESEARCH is a subject of supreme importance to fruit producers. The many problems confronting the industry can only be solved by trained scientists operating in a wider sphere than is possible for any individual grower or group of growers, however practical and well intentioned.

The list of subjects awaiting attention is a large one, including insect pest control (not forgetting thrips), codlin moth, etc., soils, manuring, irrigation, root stocks, bud selection, fungoid diseases, pruning, etc.

Much good work is being done in relation to many of the foregoing and other subjects, but on the other hand the need for continuous research is all too apparent. Wise expenditure in solving horticultural problems is fully justified and will yield economic results far exceeding their cost.

. . .

CONGRATULATIONS to the South Australian Department of Agriculture and the South Australian Fruit Marketing Association in seeking the services of a trained fruit-packing expert from another State, and congratulations to the Victorian Department of Agriculture in generously allowing their packing expert to visit the sister State to set in motion a programme for improved fruit packing. This is good. Mr. Basil Krone, the Fruit Packing Instructor of the Victorian Department of Agriculture, is a capable and genial officer. He performed good service in South Australia, and has left a good impression.

. . . .

THE SPECIAL TREATMENT meted out to the sugar industry by the Federal Government is one of the causes of the depression in the fruit industry. Abundant evidence on this subject has been given in the pages of the "Fruit World." All the special pleading in the world cannot do away with the fact that the fruit industry is suffering from this injustice. The jam manufacturing is declining, the local trade is lessening, and export markets have been largely lost, the general public is buying less fruit than ever for home jam-making. Meanwhile Australia produces nearly twice as much sugar as can be consumed in the Commonwealth; the losses on export, which are enormous, have to be recouped from the Australian consumer.

Protection is one thing, but coddling is another. The sugar industry is asking too much of the Australian public, and particularly the fruitgrower.

. . . .

WESTERN AUSTRALIA remains free of the codlin moth, thanks to the unceasing efforts of the Department of Agriculture and the hearty co-operation of growers. Continued vigilance is imperative to keep this scourge out of the Golden State.

ANSWER TO CORRESPONDENT.

Question.—In which issue of the "Fruit World" were the articles by Prof. Sir John Russell continued in, after the one published in the February issue? (No. 2 of Vol. XXX.)

Answer.—The balance of the articles by Sir John Russell were published in the "Fruit World Annual" for 1929.

A thankful heart finds roses amid its thorns, and rejoices when the unthankful heart find thorns amid the roses and complains.—J. R. Miller.

Take care to cultivate an undergrowth of small pleasures, since few great ones are let on long leases.—Old Proverb.

Happiness consists not in having much, but in wanting no more than you have.—Lydia M. Child.

He who works for the good of the world holds the key to happiness.—A. R. Noyes.

Traveller Wanted

A well-known Fruit Spray Manufacturing Firm desires the services of a Traveller who has a practical knowledge of fruit-growing.

Apply in writing with full particulars to

"Fruit Spray,"
C/o "The Fruit World,"
Box 1944, G.P.O., Melbourne.

HORTICULTURAL RESEARCH NEEDED.

Fruitgrowers Urge that Thrips and Other Problems be Studied.

FOR some considerable time arrangements have been in progress for a State-wide deputation of fruitgrowers to wait on the Minister of Agriculture to urge that research work in regard to insect pests, notably thrips, be immediately instituted. It is also intended to include in the business other matters which detrimentally affect the fruit industry. The movement is sponsored by the Mount Dandenong Fruitgrowers' Association, which is strongly supported by leading growers throughout the State, as well as cool stores and all organisations interested in the vital problems which are harmful to the industry and which remain unsolved. It is said that the understaffed condition of the Entomological side of the department will be forcibly stressed and that growers who in practice and theory have devoted years in the study and observation of the life habits of insect pests, will emphatically assert that in the event of a host invasion such as occurred in the years 1926-27, spraying for extermination purposes is utterly futile, and that the American methods for the study of the life history of the insects should be immediately adopted. Mr. G. H. Knox, M.L.A., has been active in keeping the matter under the notice of the department,

During the last five years a great deal of interesting and valuable information has been collected, some of which indicates that a wide conflict of opinion exists in connection with the involved pests problems. The understaffed condition of the department is an acknowledged fact. Early in 1927, the then Minister, Mr. Slater, admitted this to be the case, and expressed the hope that this would be remedied by the end of that year, but such hope did not eventuate. Mr. Slater, however, did establish an experimental farm at Kalorama for the study of fungoid diseases, and he brought the Burnley laboratory up to a high standard of efficiency, but there still remains the lack of science officers to utilise the advantages which exist for the carrying out of research work.

It would appear that the time is at hand for a definite "get-together" policy by the science officers of both State and Commonwealth, and it is believed that the deputation will strongly urge this procedure.

New Zealand Looks Us Over

Comparisons and Suggestions.

Views of Mr. Walter A. Tate.

TO gain an insight into Australian methods of fruit culture, particularly Cherry growing and the local marketing of fruit, Mr. Walter A. Tate, a member of the New Zealand Fruitgrowers' Federation, recently visited Australia.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
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MELBOURNE
Reference—Satisfied Growers in all States

RIDLEY & HOULDING
Covent Garden Market
LONDON
Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.
Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia.
Murdoch Bros., and A. J. Walshe & Co., Hobart, Tasmania.

Mr. Tate travelled widely and had a strenuous time. In an appreciative letter to the Editor of the "Fruit World," sent just before leaving on the homeward journey, Mr. Tate wrote:—

"The trip has been a wonderful one, and I have learnt much. From Melbourne I went to Canberra, then Young and Orange, **the home of Cherries** in Australia. As regards Cherry cluture, New Zealand has much to learn, and if the industry is to be saved from extinction (swamping of Australian importations), help will have to be granted whilst our trees are coming into full bearing. Even then I do not think we can compete with the New South Wales Cherries, as they are over-producing (only one-third are now in bearing), and their markets at times are glutted so that the merchants buy as low as 4/- and 3/6, and sell to our auctioneers, who neglect the inferior New Zealand varieties, to push the Australian hard, firm travelling fruit, and to make larger profits."

Mr. Tate then deals with some other aspects of marketing, and stating in particular that there was general adverse criticism in the several Australian markets regarding the quality and grading of Tasmanian Apples.

"As regards Apples, I really think we are years ahead in all our business, culture, pruning, and packing, etc.

Pears—Victoria leads Australia, and New Zealand is far behind.

With regard to marketing, Queensland is ahead of us all, and let me say that their methods are not so socialistic as one is led to believe. If common sense is socialism, then let us have socialism if it benefits the producer and gives the consumer a fair thing.

The Wider Vision.

"With regard to our conversations re travel as an educator, I think you could help us all by stressing the point that our leaders must move about, meet others, exchange ideas, and get out of the ruck that all men get into it whilst so full of parochial ideas. Whilst remaining in our own countries we miss the large and best things through our vision being blurred through parochial glasses.

"Australia will be a second U.S.A. when industrial troubles are soothed, and your people, our people, learn the glorious lessons of adversity, which make men and women and nations.

"What I have noticed so much is that 'fruit growing,' speaking generally, is not regarded as an industry that requires men of brains and culture. Can you not assist us to raise our industry to higher planes; we need men of brains, ability and culture to attain the success that should follow our efforts, and never forget, as Dr. Arbuthnot Lane tells us, 'that in the hands of the fruitgrowers is the salvation of our people, as by their efforts alone can be health of the people be raised.'

"We have travelled from Mildura to Cairns, and are leaving Australia full of admiration of such a beautiful land—and one so full of promise."

New South Wales.

News and Notes.

(By Our Correspondent.)

GRAPES HAVE APPEARED on the markets two or three weeks later than usual, this being due to cold weather which was experienced during the earlier growing period. Qualities to date have been patchy, due principally to those enthusiasists who rush fruit to market before it is really fit. Quite a lot may be said against this absurdity, and although not nearly so prevalent as in past years it is still frequent enough to cause a lot of harm.

The first local Grapes seen on retail display this year were the usual whites, not a bunch of which were fit. Berries were small and a vivid emerald green—or Kingfisher blue, whichever is the nearest. Nobody was buying them, and the show still appears undisturbed, although on view for three days now. Larger quantities of bunches from the Pukka earlier districts—beautiful Hamburgs and Black Muscats are not held by retailers long enough for advertising purposes.

It is an axiom in the fruit business that the worst has the best advertisement. No other class of product carries an entirely similar peculiarity, and growers all over the earth should bear this in mind. If this is sufficiently realised, quite a lot of trouble will be cleared away.

During this season Cherries, Apricots, Apples, Plums, Peaches, and now Grapes have opened up too early, and many growers have received nothing for consignments, which, if held until maturity, would have paid handsomely. The race for market is won by the man who first gets top prices and not by one whose fruit first disgraces the district he comes from. Grapes will be in heavy supply this year, and quality all that can be desired. Most of the districts report loaded vines and good sized berries and bunches. Downy mildew did little damage, and black spot was kept well in check.

TASMANIAN CURRANTS. — It has been noticed that Tasmanian Currants and other small fruits have not paid good prices this year, and apparently there annually occurs a period when surplus small fruits are difficult to dispose of. The trouble with this fruit is that steps are not taken to arrange for disposal until the situation has arrived, and it is then too late to even advise the public of opportunities to purchase in jam lots.

This is the result of non-continuity, or, if you will, spasmodic and fitful enterprise.

Many thousands of pounds of Black Currants might annually be disposed of in Sydney if a clientele were efficiently and regularly catered for. Alas—like all other varieties of fruits, we wait until a hopeless situation has arrived and then plead with the public to "roll up for their cut." The reception given to Black Currants along emergency lines two seasons or so ago proved that the people will buy them, and, presumably go on doing so. We, however, have educated them not to desire these fruits unless and until we growers are hard up against it.

I would say definitely that if the Tassie men followed ordinary business principles and created a market here with the intention of keeping it, they would dispose of far more berries and small fruits, than they at present do, and what is more, at profitable rates.

Cheap sugar undoubtedly affects the situation, but until we can get relief in that qarter it is no use unloading so indiscriminately as to give speculators supreme control.

It should not be difficult to sell 12 lb. boxes of Black Currants in Sydney every year—the half case is in many instances too large, and efforts should be directed to sell these by the box for specific home use, and not as previously, by the juicy pound. The public have on innumerable occasions responded to seasonal appeals, and will do so again and again, and the writer suggests that in future they will happily anticipate regular supplies, just as they do other fruits for domestic use. Any amount of homemade jam is cooked, and Black Currant specially enjoyed—when the fruit is available.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
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Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle
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NEW SOUTH WALES NOTES.

Strawberry growing has not advanced to the standard of general excellence which typifies so many other classes of fruit. True, there are large numbers of growers, but it is equally apparent that few reach a high standard of quality. The numbers of really successful men are small, and these so readily clear their crops and make so much good money in the process, that the Department is always willing to guide still more along the successful rows.

Mr. Gallard, Fruit Inspector for the Ryde district, which, with Eastwood, may be considered the principal Strawberry growing area for the Sydney market, is always alert to requirements, and now offers some expert advice. This is the time for recipients to get busy. The main characteristics, according to this gentleman, in a commercial variety —in order of importance—are bright red color, fairly firm texture and good size. The writer, who has had some experience in these matters, considers size of first importance, but is, of course, interposing, his ideas with due diffidence. In passing, it may be observed that the average size, as seen exposed for sale, is easily only half that seen in Europe or America.)

In order to produce something which will bear successions of even crops, Mr. Weinholz, director of plant breeding, is experimenting with cross-breeding, especially with Melba and Cresswell. It is hoped by this to eliminate leaf scorch and wilt, and the expectations are that a resistant variety of Cresswell will be developed.

The Department is also making arrangements for the introduction of widely grown American and French Strawberries, in addition to some of the best English strains.

Special preparations are being made to establish a plot for the observation of local and introduced varieties and for breeding purposes at the Hawkesbury Agricultural College.

All of this work is very necessary, principally because there is ample scope for the production of good berries and plenty of room for expansion in that section of the industry. If yields are improved and working methods systematised, good money could be won by selling for jam purposes, such of the crop as would not compare with the standard for the season.

Export of Grapes in N.S.W.

Successful Shipment to Manchester.

SUCCESS attended the consignments of Grapes sent to Manchester last season under the auspices of the N.S.W. Minister for Agriculture, Mr. Thorby. Fifty half-cases of Purple Cornichons and Ohanez from the Murrumbidgee irrigation area were sent to Manchester on March 28. Although the voyage took 68 days, it was found on inspection that there was wastage to the extent of 5 to 10 per cent. and a slight amount of mould. The waste was deemed to be due to there being too much cork dust, causing the fruit to be bruised against the lids. Also, that the fruit was not carried in cold storage on the Sydney-Hobart section of the journey.

Choice lots realised 20/- per box, the average being 11/8. South African Grapes of similar quality in boxes of 10 to 12 lbs., realised from 8/- to 12/- per case in London. Argentine Grapes, 10/- to 14/- per case of 20 lbs.

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BRAND
SPRAYS

PARSONS & JAQUES
Manufacturing Chemists
6 Patterson Street
155 Yarra Street
Abbotsford, Vic.
Tasmanian Agents—
N. L. HOPKINS, HOBART

As the average cost of the Grapes delivered Sydney was 6/2 per half-case and the export charges amounting to 3/6, there was a profit of 2/- per case. But for the wastage, the profit would have been higher.

In the opinion of the commercial officer of the Agent-General's Department, who inspected the Grapes at Manchester, there are good prospects for New South Wales Grapes there, provided shipments arrive during the latter half of May, as during that period competition is limited to South Africa and Argentina, also to English and Continental hot-house Grapes.

Grapes in Local Cool Store.

To test the keeping quality of Grapes, some ¾-bushel cases of Cornichons and Ohanez were placed cool store in Sydney at the end of April, 1929.

The methods included single and double sulphite paper, cork packing, and wood wool, while in others the Grapes had the stems dipped in hot wax before being packed in cork dust. These Grapes were found to be rotted on examination and had to be destroyed.

It is believed that the rotting was occasioned because of their keeping quality having been adversely affected by the wet weather which preceded their picking.

For several seasons now the Department of Agriculture has experimented in cold storage, and although on this occasion the results were unsatisfactory, it by no means indicates the general encouragement which other tests have offered. Seasons undoubtedly affect the keeping qualities of not only Grapes, but all other kinds of fruit; whilst better supervision over harvesting operations has proved very worth while. During the recent festive season, Grapes from the U.S.A. were on sale all over Sydney. The samples were exceedingly poor, but they met with a more or less ready sale—due, no doubt, to the novelty of the whole affair.

Our experts are convinced that we can hold Grapes with profit until January if necessary, and these gentlemen are doing all in their power to prove this fact.

Growers, however, will not only have to more diligently approach the harvesting and packing operations, but more seriously study the irrigation calendar when making final applications of water.

Grapes which are to be held for any length of time either per medium of cold storage or refrigerating hold, should be produced with the minimum of moisture, and as the export and late markets are practically open only to irrigation growers, there should not be much difficulty in arriving at such cultural methods as will ensure keeping qualities. Apart altogether from these departmental experiments are those shipments made by the Leeton and Griffith growers to America sands yearly, almost invariably open each year. These total several thouup in sound condition. It is said of these shipments, too, that all depends upon the preparation at this end. Probably few growers take more pains with their packs than do the men from our irrigation area, but even these at times have not been quite satisfied with themselves.

It would now appear that departmental efforts, having established the possibilities for profitable export, will be concentrated in educational efforts to minimise loss by reason of faults such as have been discovered. It should be possible to produce the type of Grape which will stand prolonged refrigerating, and it is certainly possible to exercise such care in selection that only the fit and proper bunches will be packed.

Reports from

Singapore and the East

generally now indicate enormous possibilities for trade there, and it is pleasing to know that other States have established trade which is acceptable to consumers in those parts.

New South Wales to the present has suffered by comparison with these growers, but are now better able to supervise all necessary operations to ensure the standardisation which is so essential.

PRUNE GROWERS' ASSOCIATION.

Now Re-organised.

The seventh Annual Conference of the Prune Growers' Association of N.S.W. was held recently at Young, N.S.W.

In declaring the Conference open, Mr. J. Thompson expressed appreciation of the valuable services of Mr. Dixon, who, until his resignation recently, had been President of the Association since its inception.

Mr. Thompson stated that the Association had done valuable work in the past, and had succeeded in standardising the processing, grading, packing and, to a large extent, the marketing of Prunes, but it appeared that it was no longer needed in its present form, and therefore must be either wound up or re-constituted.

The suggested poll of the growers to see if a Marketing Board was desired was not gone on with, as it was believed an affirmative vote would not be secured.

The Government had increased the duty on imported Prunes to 6d. per lb., the amount asked for by the Association.

It was resolved by the Conference that the Association be reconstituted by the formation of an Executive formed by representatives form the Young District Producers' Co-operative Association and the Irrigation Co-operative Societies.

Australia's Fruit Export.

Seasonal Difficulties to be Overcome.

Victoria's Export Quantity Now Reduced to 850,000 Cases of Apples and Pears.

THE 1930 APPLE EXPORT SEASON, which opens in the latter half of this month, has provided full scope for the patience and resourcefulness of growers, exporters and shipping companies.

There have been many difficulties to overcome.

At the blooming period the prospects in Victoria appeared to be quite equal to the record year of 1928, but since then many serious setbacks have befallen the various districts. In the northern areas very severe losses were suffered in Harcourt, Bendigo, and Campbell's Creek, through a frost visitation, and since then disastrous hail storms in many centres have taken a heavy toll of the crop, the latter being vastly more serious than the former, as the fruit still remains on the trees, and is using up energy that will debilitate the trees and preclude the possibility of the trees responding next year.

In the south the unsuitable weather conditions have been the cause of the development of black spot fungus to an extent not seen for many years; this will result in a considerable shrinkage of the optimistic yields estimated some time ago. In addition it means very expensive harvesting costs and a general slowing down on the output of the export pack.

It is now anticipated that from Victoria the total Apple export will be not more than 750,000 cases of Apples, and 80-100,000 cases of Pears.

Freight arrangements have been in consequence very difficult to finalise as agents and merchants are very uncertain as to the final out-turn of export quality fruit.

The steamers so far arranged to carry from Victoria, are as follows, quantities in each are still uncertain.

Sailing date from Melbourne.	Name of Steamer.	Destination.
February 18	"Delphic"	Liverpool, London and Hull.
„ 25	"Comorin"	London.
„ 26	"Moreton Bay"	Hull and London.
March 1	"Nestor"	London and Liverpool.
„ 4	"Runic"	Glasgow and Liverpool.
„ 8	"Tekoa"	London, Hamburg and Hull.
„ 11	"Naldera"	London.
„ 12	"Barrabool"	London.
„ 14	"Port Melbourne"	Hamburg, Rotterdam and Hull.
„ 14	"City of Winchester"	Hamburg.
„ 15	"Hurunui"	Hamburg.
„ 15	"Telamon"	Glasgow and Liverpool.
„ 18	"Orford"	London.
„ 21	"Demosthenes"	London.
„ 25	"Mongolia"	London.
„ 26	"Hobson's Bay"	London.
„ 29	"Port Bowen"	Rotterdam, Hamburg and Hull.
April 1	"Oronsay"	London.
„ 8	"Narkunda"	London.
„ 9	"Balranald"	London.
„ 11	"Berwickshire"	Manchester.
„ 15	"Orontes"	London.
„ 16	"Asphalon"	Glasgow and Liverpool.
„ 19	"Pt. Hobart"	Rotterdam, Hamburg and Hull.
„ 19	"Ballarat"	London.
„ 22	"Cathay"	London.
„ 23	"Esperance Bay"	Hull and London.
„ 26	"Ulysses"	Glasgow and Liverpool.
„ 29	"Orama"	London.
May 6	"Mooltan"	London.
„ 7	"Jervis Bay"	Hull and London.
„ 10	"Anchises"	Glasgow and Liverpool.

Australian and New Zealand Fruit

A Review of the 1929 Export Season.

AN interesting review of the 1929 fruit export season from Australia and New Zealand is given in a comprehensive report issued by Messrs. F. W. Moore & Co. Ltd., Clarence House, London, E.C.4.

The total shipments to all ports were as follows:—

From—	Apples.	Pears.	Grapes.
Tasmania .	867,910	52,932	—
W. Australia	603,861	32,791	17,474
Victoria . .	1,746	23,324	—
S. Australia	1,826	1,437	—
N.S.W.. . .	649	4,500	—
New Zealand	737,172	45,949	—
	2,213,164	160,933	17,474

The report states that few of the April-May arrivals from Australia were of good average quality. Some mere much worse than the expected standard. The opinion is expressed that the poor condition was due to warm Apples being stowed in holds with partially cooled fruit and extra delay in reducing temperatures, enabled serious fungal affections to propagate. Cleopatras, Scarlet Nonpareils and Sturmers from Tasmania suffered most from black spot. Jonathans from Western Australia often arrived in weak to bad condition, so much so that on the Continent this variety is subject to much condemnation. Prices were unremunerative during May. During June and July returns were good, and had there been Apples to come as late as August, they would have done better than the April-May shipments. Cleos. averaged about 13/- per case for the season, and Sturmers 15/6.

Methods of Loading.—A definite change should be made in the loading of ships at Australian ports. Smaller holds are desirable, as these can be completely filled at one port. The only alternative would be the provision of sufficient cold storage at each port, and that loadings should be made direct from cold store into the ship. There are practical difficulties in the way. The trade is not convinced as to the necessity for pre-cooling of Apples, though pre-cooling of Pears is advised.

Export Varieties.—A few years ago there was a rage for Jonathans, but Continental buyers have now largely turned against this variety. Alfristons, once despised in London, now maintain consistent values, second only to Dunns. Hollow Crown, formerly despised, is now sought after by Jewish vendors, who like it because it weighs so well.

The Commonwealth Department of Markets proposes to prohibit from the beginning of 1931, quite a large number of varieties which have for years been coming to England. The Department would seem to have much to learn about both Apples and markets. The best of Apples are never considered good when the markets are bad. When the markets are good even the commonest varieties have remarkable values.

A new feature has been the entrance of Chili as a competitor. Last season 25,000 cases were received at Hamburg from Chili. They were good showy Apples and carried in excellent condition. The shipment went into Germany at the preferential rate of duty which Canada, South Africa and New Zealand fruit also enjoy, but which the Australian Government has not yet obtained for the fruitgrowers of the Commonwealth.

Cases and Case Timber.—Despite the activity of Canadian timber interests, and the fact that New Zealand exporters use Canadian pinewood cases, there is, in reality, nothing to commend the pinewood case above that of the planed hardwood case—except in relation to weight. But the lighter weight of the pinewood case does not benefit the grower, who gets no more for his Apples packed in pinewood cases than for similar Apples packed in hardwood, although the buyer ought to be able to effect a considerable saving on rail freight, which is calculated on weight. Buyers pay no more for Apples in the pinewood cases, and there is nothing in the change that would benefit the grower.

Bitter Pit.—As usual, much bitter pit was appearing in several cargoes, particularly C.O.P.'s, Ribston Pippins, Cleopatras and Sturmers. It was suggested that C.O.P.'s might be allowed to remain longer on the trees.

Prospects for 1930.—At the time of writing (December, 1929), the outlook for 1930 appeared fairly good, as the U.S.A. crop is below average in some varieties, notably Newtown Pippins. On the other hand, crops of Winesaps are heavy, and these arrive in England when supplies from Australia and New Zealand are coming to hand.

Spray Residue Removal

Latest Advices from U.S.A.

METHODS for removal of the spray residue on Apples and Pears are given in a recent letter from Mr. H. C. Diehl, Plant Physiologist, U.S.A. Department of Agriculture, to the editor of the "Fruit World."

Mr. Diehl is stationed at Wenatchee, a very important Apple-growing centre in the State of Washington, on the N.W. Pacific Coast of U.S.A. His letter is as follows:—

The business of fruit cleaning has become reasonably well standardised and quite universal in the more important Western tree fruit districts. Of course, we still find ourselves confronted with many special problems and unusual situations, some of which call for emergency activities.

We find, for instance, that in the main Washington districts, due to the rather heavy worm infestation and season generally favorable for codlin moth activity, heavier and later spraying programmes were followed, many involving the late use of oil sprays alone or in combination. Some of these combinations have been unusually difficult to clean to the required tolerance. Generally, it has been accomplished only when the

acid solution was warmed

to 90-100 degrees F., since increases in acid concentrations above four gallons of commercial muriatic acid to the hundred do not generally result in proportionately greater cleaning efficiency than do added gallons up to that point, especially on oily or waxy fruit.

In view of the increased use of oil sprays, particularly those in combination with lead arsenate, which the entomologists tell us materially enhance worm control, we have devoted much of our time to a study of the relation of ease or difficulty of cleaning to the use of such sprays.

This week we are just experimentally washing the fruit from our seventy-five plots in Yakima, each of them emphasising some particular difference in concentration or time of application of the combined sprays or some variation in the type of oil used. I hope to be able to complete my report for the four years of residue removal study, and to bring this project into a less important rank in our experimental plans. We have, of course, issued reports of findings designed to be of immediate assistance to the fruit industry, but we have not yet reported the work in detail bringing out the more fundamentally scientific aspects.

Commercial equipment is now available in well standardised forms, such as the Bean, the new Cutler, the Moe and the Ideal washers. Their suitability for any particular packing operation has, of course, to be determined in each case.

In addition, we helped to develop a few types of ranch (or orchard home) washers, because we wanted to assure the growers that the washing programme need not necessarily bring them to central packing, at least until they wished to because of reasons other than residue removal. These ranch washers are quite satisfactory, particularly if some method of washing solution agitation is involved, and many of them are in use, particularly in the Wenatchee and Southern Idaho districts.

The warming of the acid, which I referred to above, is accomplished by electric immersion heating elements, by the application of steam in coils, or as live steam or by direct heating in monel metal or cast iron water jacketed stoves or in wrought iron coils, hung in stoves. The choice of the method of heating depends much on the tonnage to be handled and the type of washing equipment in use, as well as the packer's individual preferences. Manufacturers and the Engineering Department of the Washington State College are at present co-operating with us in an economic study of these different forms of heat application and in the devising of suitable, preferably thermostatically controlled, equipment.

There have been many improvements since you were here; too many to record within the compass of one letter. I have merely skipped about on the highest points so that you will know that we have gained much in experience, but are still learning.

BRISBANE FRUIT TRADE.

Hedley Geeves Business to be a Limited Company.

Mr. Hedley Geeves, growers' agent, Fruit Exchange, Turbot-street, Brisbane, notifies that he has decided to turn his business into a limited company. The present members of the staff are to be the shareholders, with Mr. Geeves as managing director.

It is believed that greater efficiency will be brought about by the members of the staff having an interest in the firm.

Mr. Geeves states that reliable advice, best market price and prompt returns will continue to be the aim of the company. The policy of the company will be to develop the connection with both growers and buyers.

Trade With the East

Important Conference in Sydney.

Opportunities for Australian Fruits—Fresh, Canned and Dried—Also Other Commodities.

Commercial Trade Representative Needed.

QUITE A LARGE NUMBER of delegates attended the meeting of the N.S.W. Fruit Marketing Committee on January 6, particular interest being centred around the visit of Mr. A. Butcher, of the Singapore Fresh Food & Products Co., who is visiting here to definitely encourage trade in Australian fruit. Mr. Butcher was able to make very interesting comparisons with competitive fruit supplies and packs, but quite definitely stated that not only was the quality of Australian fruit superior to that of the U.S.A., but that the people liked it better. Unfortunately our fruits are not backed up by Government trade representation, such as that accorded to the fruit from America. We have no trade Commissioner to assist, neither do we work under a national brand such as is done by others, neither have we the necessary shipping facilities to land fruit in the best possible condition.

At present Apples, Grapes and Plums might profitably be exported to Singapore and Java, these places holding a population of 55,000,000 people, of whom an exceedingly large number are possible customers. Whereas our fruit suffers when holds are opened (at least four times between Sydney and Singapore) the American fruit is sealed down and thus invariably lands in good condition, Mr. Butcher did not hold much hope for citrus exportation to the East, owing to the firm hold which "Sunkist" fruits have gained. This, however, should not deter citrus men, as we have the advantage of season and distance in our favor, and should make a determined fight for the trade.

Trade Representative Needed.

It was interesting to learn that Canada finds the services of a trade representative in Java quite necessary, whereas our man was withdrawn some time ago, and no steps have yet been taken to replace him. Every growers' organisation in the Commonwealth should stand behind an endeavor to ensure recognition of interests in this part of the world.

Although China will ultimately become our largest market for not only fruit, but every other class of primary production, the Straits and adjacent countries must not longer be left neglected.

Mr. Butcher in stressing these points, also emphasised the fact that the United States, over a voyage of 38 days from California, compared with 17 days in which we can land fruit at Singapore, can yet beat us by 1/3 per case in freights. This is a very serious state of affairs, and is accentuated by the knowledge that the American ships carry better refrigerating accommodation and cater specifically for the fruit trade in season.

As usual, the case question proved one of the most important. The sooner our growers realise that they must conform to the sizes now adopted as standard, the better. Retailers in all parts of the world are exceedingly fastidious, and when accustomed to specific containers and the counts they contain, base all calculations from that source. Mr. Butcher stressed this point, together with national advertising, and advised in this respect that California was very well served. He noted that the adoption of one brand, such as "Sunkist," made advertising easy to direct, and suggested that our men should do likewise. To prove the value of the Singapore market alone, it was stated that at least 100,000 cases of Apples were required there annually.

Continuity of Supplies.

Of next importance for Eastern trade—and indeed of vital importance—is continuity of supplies. If all the Apples for that market were dispatched through one single agency, such as the ultimate organisation will result in, then supplies would be maintained over the export seasons, practically throughout the year.

Citrus, Grapes, Plums, Pears, and all other fruits would go forward regularly in stated quantities, and merchants then be able to provide for a regular trade. This, so far as Australian fruits are concerned, has previously been impossible. This provision will prevent the absurdity of changing labels which has worked so much confusion. It might here be mentioned that our labels and posters, although much appreciated here, have at times proved totally unsuitable in foreign countries.

Mr. Butcher referred to other matters regarding the possibilities of this trade, and concluded by emphasising the fact that Australian growers were unquestionably offered preference if they will grade, pack, label and distribute along the lines set out. On the motion of Mr. Such, seconded by Mr. Blick, a hearty vote of thanks was given, and Mr. Butcher, in reply, epitomised the situation by adding: "Given all other necessaries, continuity is the key to success. Markets must be retained even in times of scarcity, and full supplies maintained even should the local market offer more immediate advantages. You cannot dispose of the surpluses if you do not retain your customers. Their businesses depend upon continuity, and if you do not provide it, someone else will."

TRADE WITH EAST.

Opportunity for Australia.

Need for Representation.

Urging that more vigorous attempts be made to obtain overseas markets for Australian primary products, particularly in the East, the Chairman of the State Rivers and Water Supply Commission (Mr. W. Cattanach) points out that the action of the Federal Ministry in appointing a trade representative in Canada was far more than justifying itself by results. In 1926 the export of Raisins and Currants to Canada from Australia was less than 800 tons. This year it had reached 4,500 tons. In canned fruits the result was even more striking. In 1926 there were no exports to Canada from Australia, but this year nearly 1,500,000 tins of canned fruits would be exported thither. Other products were also showing satisfactory improvement.

Queensland

SUPPLIES of fruit on the Brisbane market during the closing months of last year were meagre in quantity, and, with few exceptions, deficient in quality. Local Peaches, northern Mangoes, and a few local Grapes only were at all commendatory.

Apples received from the south had become insipid from storage, and on the whole were very inferior.

A decided improvement has attended the new year, and deciduous fruits of excellent quality from Stanthorpe (where the fruit fly is barely in evidence this season), are in plentiful supply, in addition to Mangoes, Pineapples, etc. Bananas are invariably in evidence, but the average supplies are so far below first class that they hardly warrant comment.

The indifferent quality of southern Apples is obviously insufficient for some packers, who, probably with the idea of offering some recompense, reduce the quantity by a layer in a case, and including in its stead packing material. The purchasers, however, are not satisfied, but as the regulations applicable to fruit generally, whilst defining the capacity of cases, make no provision as to their being reasonably filled. A promise has been received by the importers that this omission will be rectified ere next season.

Some N.S.W. lines of Cherries displayed the extent and trouble which packers are prepared to apply, in an endeavor to defeat the conditions re topping fruit. The keen perceptions of the official engaged in this particular feature has no doubt impressed on such packers the futility of attempted evasion in this direction. On the whole the condition of interstate fruits receive, leaves little to be desired until the advent of cool-stored fruit.

The indications point to an all-round increased supply of fruit this year, though rains throughout the fruit districts have not been copious they have generally been sufficient to meet actual requirements.

T. STOTT & SONS
Fruit Merchants
Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,
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Cooksley & Co.
(W. P. COOKSLEY)
Reliable Fruit Agents
Over 30 Years Experience
TRY THEM !
Telegraphic Address:
"COOKSLEYS," BRISBANE
Fruit Exchange, Brisbane
QUEENSLAND
Shipping No. 29
Reference: Commercial Banking Co. of Sydney Ltd.

Do not run any Financial Risk with your Fruit but Consign it to

HEDLEY GEEVES LIMITED

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FRUIT EXCHANGE——BRISBANE

SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

C.O.D. Ballot.

A matter of much interest to all growers was the recent ballot for the continuation of the C.O.D. An affirmative vote was anticipated, for it was recognised to scrap the present organisation would provide no benefit, but lead to chaos. Mistakes have been made by the controlling body in the past, but it is reasonable to expect that there will not be repetitions, but rather that they should be profited by in the future. The fact that the powers of the organisation were curtailed in important aspects by the ex-Government—who were responsible for the inauguration—had no doubt some bearing in accounting for such an overwhelming majority in the ballot.

HAMBURG
(GERMANY).

Ph. Astheimer
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Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear

Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.

Highest Market Rates Assured
Prompt Settlements

* * *

Regarding the fruit season in this State: This extends all the year round, from January 1 to December 31, so that estimates for the year may, on account of unexpected conditions, floods, drought, etc., be very far from correct, and those submitted are based on a normal season.

Estimated Crops for the Current Year.

Grapes, 1,800 tons. (No dried fruit is produced in this State. Grapes used for table and wine only. Quantity of wine, 37,210 gallons.)

Bananas, 1,500,000 bushels.
Pineapples, 475,000 bushels.
Citrus, 420,000 bushels.
Mangoes, 55,000 bushels.
Custard Apples, 38,000 bushels.
Apples, 80,000 bushels.
Pears, 14,000 bushels.
Peaches, 96,000 bushels.
Plums, 63,000 bushels.
Papaws, 14,500 bushels.
Other fruits, 21,000 bushels.
Strawberries, 155,000 quarts.

Fairly large areas of citrus, Pineapples and Bananas were planted last year, and planting of the latter still continues, and regarding this there is much confliction of opinion.

Banana Planting—and Bunchy Top.

It is well known that the Agricultural Department's officials were against permitting any planting where "bunchy top" existed, or had existed during the previous twelve months, but fortunately or unfortunately, they were over-ruled, to which a change of Government was no doubt mainly responsible.

As more than half the Banana districts in southern Queensland are more or less acquainted with the scourge, the objection to the official method recommended of eradicating the disease by preventing further planting until the various localities were freed from it, can be well understood.

As a palliative, a Board was appointed to deal with the situation, but it is most obvious that the majority of the Board are actuated by sentiment instead of common sense.

To effectively deal with this menace which threatens the industry in the south, a commission of scientists was appointed a few years since, to go thoroughly into the matter, with a view to ultimately effecting its eradication. That the matter was most capably and comprehensively dealt with is admitted on all sides, as is also the fact that the recommendations made may just as well have been turned down flat for all the action that has followed.

Owing to the personal efforts of Dr. Goddard (Chairman of the Commission), aided by official inspectors when required, two districts on the south coast were cleared of the disease, but the clearing ended there. Now it is reported that the disease is re-appearing in Tallebudgera district owing to its prevalence in the adjoining area, Nerang, from whence incidentally, one of the members of the controlling Board hails.

It may be mentioned that the Board is constituted of four members, two representing the Banana growers, the Director of Marketing (who admits that he has no knowledge of the productive aspect), and a representative of the fruit branch of the Agricultural Department.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of
G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
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Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.

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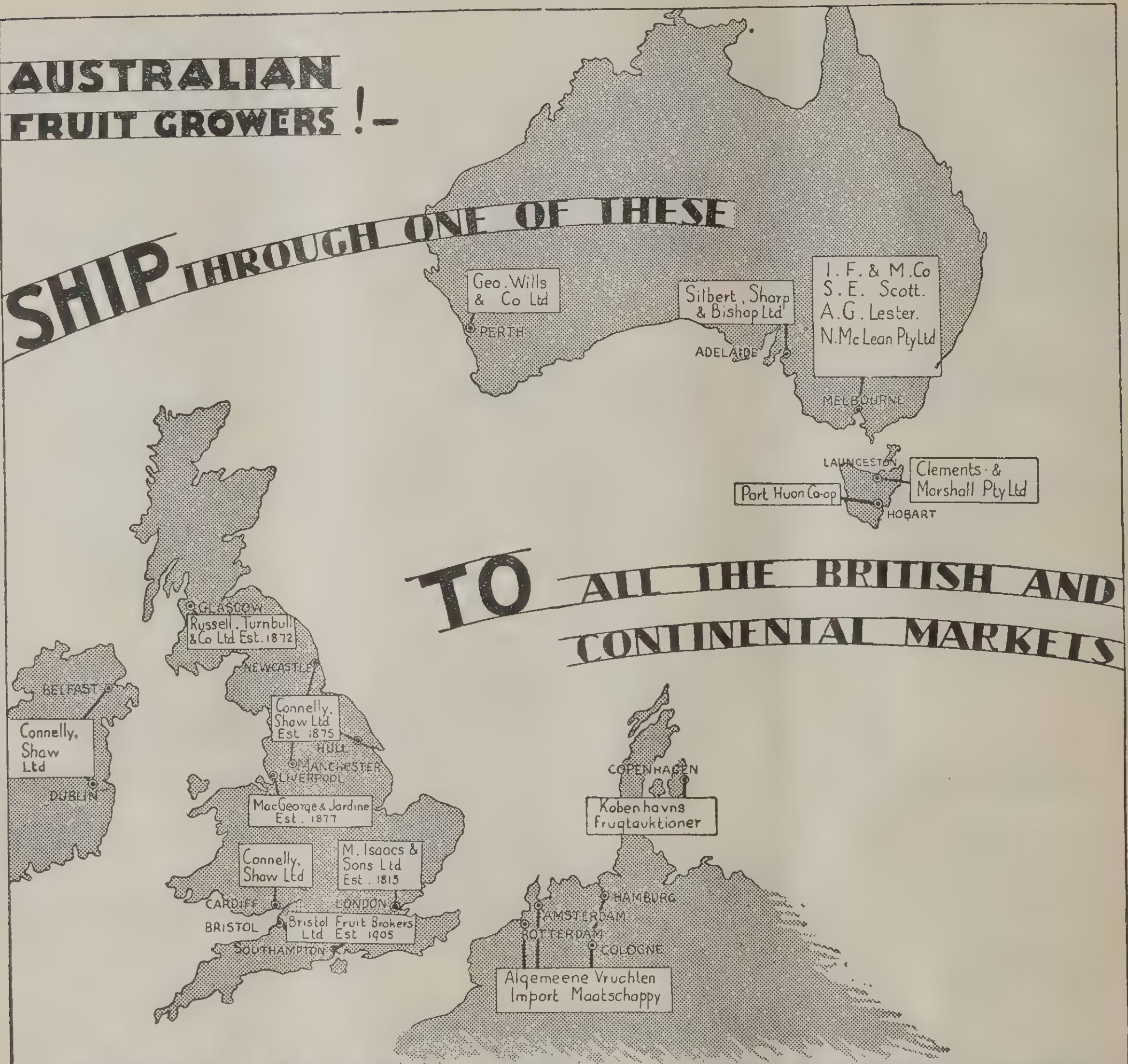
Tel. add. "ERCOT," Hobart.
Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

It is not an extravagant statement that under existing conditions the limit of the life of the Banana industry in the southern districts will extend little, if anything, over five years, by that time, probably the tropical north will fill the vacancy—that is, if not interferred with by boards and such other sundries as may be brought into existence to escape the obvious in dealing with diseases, etc.

AUSTRALIAN FRUIT GROWERS !—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Temple Court, Collins-st., Melbourne.
Tel. F3284. Tel. Add.: "Columbine," Melb.

TASMANIA.

State Fruit Advisory Board.

A MEETING of the State Fruit Advisory Board was held at the Department of Agriculture on January 14, 1930.

There were present:—Messrs. B. J. Pearsall, M.H.A. (Chairman), Neil Campbell, M.H.A., B. H. Saunders, A. Davies, T. J. Eddington, W. H. Calvert, M.L.C., O. J. Morrisby, F. Peacock, J. P. Piggott, M.H.A., V. J. Skinner, P. H. Thomas (Secretary), Mr. J. H. Astell was present by invitation.

Export Grading Regulations.—A reply having been received from the Minister for Markets regarding proposed amendments, it was decided to wait on the Minister by deputation.

Interstate Conference of Fruitgrowers.—It was decided to request the Tasmanian affiliated Associations to meet the Board and discuss certain items on the agenda.

Sydney Committee of Agents.—Mr. T. J. Eddington presented his report re the conference with the Sydney Committee of agents, and was thanked. Mr. A. J. Cooper, Chairman of the Sydney Committee of Agents, wrote suggesting that the N.S.W. Government might, at the request of the Tasmanian Board, relieve accredited agents from certain conditions in the Farm Produce Act. It was decided to refer this matter to the Sydney Committee.

Market Development Fund.—Mr. Astell submitted a scheme for opening new markets by means of a levy on exports. It was decided to adopt the principle and send details to the Minister of Markets for consideration.

Export Matters.—A uniform label for exports was adopted. In order to maintain supervision of both North and South exports, it was decided to appoint both senior and junior representatives. A sub-committee consisting of Messrs. Pearsall, Campbell, Davies, Eddington and Saunders, was appointed to consider all the charges incidental to fruit export.

State Fruit Marketing Bill.—Mr. Saunders gave notive of motion for the following meeting:—

> "That this Board requests the Minister for Agriculture to bring in a Bill to be called 'The Fresh Fruits Marketing Bill,' giving to a Board of seven members elected by the growers' Executive, control of all fresh Apple and Pear exports."

Marketing of Black Currants.—A resolution was adopted thanking the Victorian and Tasmanian Railways, the Committee of Selected Agents, and the "Press," for their efforts in the disposal of Black Currants.

TASMANIA'S APPLE TRADE.

Interstate Shipments and Cold Storage.

INTERSTATE Apple exports are now finished, and some interesting points have been brought to light.

Estimates based on monthly returns from the various cold stores, and reports of weekly shipments from the agents, show that in the past season smaller quantities of fruit were held for the interstate markets than was the case in 1928, though the proportion of the 1929 crop held for these markets was much greater. Nevertheless up till July, interstate exports for the two seasons were very comparable.

With regard to the storage of the fruit, at the end of June some 210,000 cases, it is estimated, were retained in ordinary store, whilst a further 240,000 cases were held under cold store. This gives an interesting comparison with the previous year (1928), when it was estimated that almost 500,000 cases were held in ordinary store, whilst only 185,000 cases were cold stored. From this it can be seen that orchardists were quick to grasp the advantages offered by the increased amount of cold storage space available, for the better regulation of their marketing.

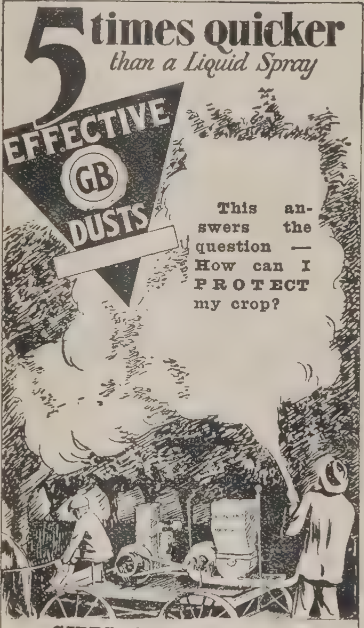
Although it is difficult to arrive at exact figures, returns would indicate that in 1929, of the total Apples retained in the State after the last overseas boat had left, some 34 per cent. were held in cold store, as compared with about 20 per cent. in 1928.

The following table indicates briefly the position:—

Year.	Ordinary Store. June 30.	Cold Store. June 30.	Total.
1929	205,918	236,072	441,990
1928	489,954	184,450	674,404

The "cold store" figure represents the highest aggregate return received, which in each year occurred at the end of June; the "ordinary store" figures represents the estimated Apples held in growers' sheds at this date; local consumption would necessitate additions to this figure, but no attempt is made here to do so.—P. H. Thomas, State Chief Horticulturist.

DUSTING



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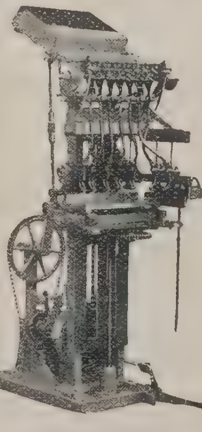

SOLE AGENTS,
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South Australian Fruit Marketing Association

THE monthly meeting of the Executive Committee of the South Australian Fruit Marketing Association was held at the Secretary's office on Monday, January 6. There was a good attendance of delegates.

Fruit Shipments
United Kingdom
and the Continent

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& CO.
24 Southwark St., London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
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TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.

Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.
H. JONES & CO. LTD.,
HOBART

Correspondence was received from the Department of Markets and Transport, Canberra, in regard to the prevention of shipment of immature fruit.

From Mr. G. Quinn, Chief Horticultural Instructor, re opening time for exporting Apples oversea, and from the Secretary of the S.A. Fruitgrowers' and Market Gardeners' Association re prohibition of export of infected fruit.

Advice was received from the Gerrard Wire Company to the effect that arrangements would be made during the coming season to have a man on the wharf for opening cases for inspection.

The shipping sub-committee reported having held a conference with the Committee of the Oversea Shipping Representatives' Association in regard to Apple freight for the coming season, and in view of the uncertainty of the present position it was resolved to ask the Shipping Association for a further conference during the next few days, when it was hoped that definite information would be available.

It was considered that space was required for Hamburg alone for 425,000 cases between March 8 and May 8, and only a small proportion of this was definitely allotted up to date.

Fruit Packing Expert.

Arrangements were completed for the visit of Mr. B. Krone, Victorian Fruit Packing Expert, from January 13 to 20, and an itinerary had been drawn up, and a copy would be posted to every member inviting them to attend the school and demonstrations which Mr. Krone would conduct. The arrangements for the visit were made by the Committee of the Association, in conjunction with Mr. G. Quinn, Chief Horticultural Instructor, and it is considered that the visit will be the means of considerably improving the Apple pack in South Australia.

It was resolved that the Federal authorities be asked, through Mr. G. Quinn, to arrange for the services of four inspectors on the wharfs at Port Adelaide and Outer Harbor to enable the exceptionally large export to be adequately handled, and avoid the delays and inconvenience experienced in 1928.

It was reported that three inspectors would be available in the country districts for the preliminary inspection in packing sheds.

NEW SOUTH WALES DRIED FRUITS BOARD.

Nomination of Candidates for Election.

The New South Wales Dried Fruits Board consists of three members, one, the Chairman, Mr. G. J. Evatt, a Commissioner for Water Conservation and Irrigation, appointed by the Governor, one elected by the growers on the Murrumbidgee irrigation areas, and one elected by the growers within the rest of the State of New South Wales.

The elected members hold office for a period of two years.

The present elected members are Mr. W. M. Nulty, of Leeton, representing the growers on the Murrumbidgee irrigation areas, and Mr. H. R. Sloan, of Curlwaa, representing the growers within the rest of the State. The term of office of the elected members will expire at the end of the current month, and an election will be held on February 3 next.

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The following nominations for election have been received:—

To represent growers on the Murrumbidgee irrigation areas:—E. J. Hudson (Yenda), W. M. Nulty (Leeton), G. A. Rose (Yenda), R. A. Struck (Yanco).

To represent growers within the rest of the State:—R. A. C. Freeman (Coomealla), L. B. O'Donnell (Curlwaa).

Canned Fruit Industry.

Increased Duties Desired.

Mr. James L. Moore, General-Secretary of the Commonwealth Jam and Condiment Manufacturers' Association, and of the Australian Fruit Canners' Association, giving evidence before the Tariff Board on January 20, stated that the Australian fruitgrowing industry required a general overhaul. Increased duties were desired on fruit and vegetables (including ginger), preserved in liquid, partly preserved or pulped.

The fruitgrowing industry was indiscriminately accelerated in the after-the-war years, stated Mr. Moore, men were put to grow fruit on blocks of land, many of which were totally unsuited for the purpose.

Large quantities of canned fruits imported into Australia in recent years had prejudiced the industry, which had for years been dependent on Government assistance.

The Commonwealth and State Governments had expended more than £30,000,000 in irrigation schemes, to which had to be added the cost of soldier settlements—£35,634,254. In addition, the total advances to settlers to June 30, 1927, totalled £130,495,071, the amount outstanding at June 30 last being £79,357,793. The ultimate success of irrigation and closer settlement schemes was dependent on settlers having a payable market. Any setback would jeopardise the industry and the irrigation movements which had cost the Australian taxpayers £140,000,000.

Continuing, Mr. Moore stated that overseas competitors sold 80 per cent. of their pack in the home market, leaving 20 per cent. of the world's markets at prices against which Australians could not effectively compete.

Since 1920-21, the assistance given by the Government to the canned fruit industry amounted to £905,933. In that period the yearly production of Apricots, Peaches and Pears canned in Australia had increased from 13,470 tons to 33,587 tons. Fully 20 per cent. of the Clingstone Peaches grown in Australia each year were an economic loss. The fruit was fed to horses and pigs.

Sugar too Costly.

The loss was largely attributable to the undue protection given to the sugar industry. The sugar industry should be protected, but not so that the burden should fall so heavily on the fruit industry.

Fruit below a certain grade, which was only suitable for jam, was rejected for canning, and canneries found it unprofitable to buy the fruit for jam making. There was a lot of wastage in the canneries of fruit suited for jam making. Cheaper sugar would result in cheaper jam and canned fruits.

A drop in prices would extend the market, and an increase in the consumption of jam and canned fruits would provide an increase in the consumption of sugar.

Sugar cost jam makers £30/6/8 a ton. It could be landed in Australia, duty free, for £12/10/- a ton. Although the population of Australia had increased by 1,500,000 since 1912, the production of jam in the same period had decreased 5 lbs. per head of population.

The inquiry was adjourned.

CANNED FRUITS—1929 SEASON'S EXPORTS.

The exports of canned fruits to various destinations from the commencement of the season to November 30, 1929, were as follows:—

Destination.	Apricots. Doz., 30oz.	Peaches. Doz., 30oz.	Pears. Doz., 30oz.	Totals.
United Kingdom	179,045	335,718	150,985	656,748
New Zealand	47,689	113,133	2,386	163,208
The East	1,712	3,751	3,045	8,508
Canada	10,702	93,785	7,911	112,398
Miscellaneous	1,495	3,030	2,567	7,092
Totals	231,643	549,417	166,894	947,954

CANNED FRUITS FOR NEW ZEALAND.

Minimum Prices Fixed.

In connection with the export of Australian canned fruits to Canada and New Zealand, the Control Board fixed the following minimum selling prices to come into operation from December 13:—

Canada.
Per Doz. Tins.

	Ones.	Twos.	2½'s.	Tens.
Apricots	5/3	6/3	8/–	27/6
Peaches	5/3	6/6	8/3	27/6
Pears	6/–	7/3	9/6	—

Prices to buyer are net f.o.b. Australian port. Shipment to be effected not later than September 30, 1930. A maximum commission of 5 per cent. is allowed to agent, who is required to give an undertaking to his principal that no portion of that commission or other concession will be passed on to the buyer.

New Zealand.
Per Doz. Tins.

	Standard. 2½'s.	Seconds. 2½'s.	Standard. Ones.
Apricots	7/9	7/–	5/6
Peaches	8/3	7/6	5/9
Pears	9/2	—	6/9

Prices to merchant are net f.o.b. demand draft. Shipment to be effected not later than September 30, 1930. A maximum commission of 2½ per cent. is allowed to agent, who is required to give an undertaking to his principal that no portion of that commission or other concession will be passed on to buyer.

Lime Sulphur.—Valuable information on lime sulphur wash is obtainable from a booklet just issued by Messrs. Victor Leggo and Farmers Ltd., 218 Queen-street, Melbourne. The firm recommends lime sulphur wash for use against various scales on citrus and deciduous fruit trees.

A Revelation in Orchard Efficiency!

The "NEW" 1930 GUIDER FRUIT GRADER

Sensationally Low-Priced

Write now for particulars

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BOX 57 — Shepparton, Vic.

Arbitration Case.

Wages Reduced

THE Australian Workers' Union submitted a log for increased wages on fruitgrowers in Victoria, South Australia and New South Wales.

As the log was not acceptable to employers, the case was taken into the Arbitration Court, and was heard before Chief Judge Dethridge. The log submitted by employers asked that wages should range from £1 per week for lads under 17 years, to £3 a week for adults, and wages for women from 15/- a week to 35/- a week—on a 48 hour week.

The plaint lodged by the Australian Workers' Union claimed that wages should range from £6/10/- a week for dipper-men and foremen of different grades, to £3/12/6 a week for boys under 16 years—a week of 44 hours; certain holidays were claimed and double pay for work on holidays, and that preference be given to unionists.

Mr. E. Grandler represented the A.W.U.

His Honor said the industry had been over-developed, and at the present prices a considerable proportion of the employees would have to go out. The question was, was it desirable to prolong their lives as far as possible or shorten them? That was the position which both employers and employees had to face.

"Politicians and Arbitration Court."

Harry Showell, fruitgrower, of Renmark, South Australia, on behalf of the employers, said he had not made anything out of the industry for the past seven years, his reserve capital was being slowly eaten up. Fruitgrowers were at the mercy of politicians and arbitration courts, and could not help themselves. The whole economic system seemed to be against them.

Chief Judge Dethridge in the Arbitration Court on January 28 announced the Court's new award, which, he stated, chiefly affected the dried fruits industry in the irrigation settlements in the Murray area of New South Wales, Victoria and South Australia. The dried fruits industry was in a bad way: in the canned fruits section the position was also difficult. Production had so increased that there was an immense surplus exported to outside markets in competition with foreign competitors. The 3/- per week added by Mr. Justice Powers to the basic wage would be reduced to 6d.

The Award.

The rates of pay for adult male employees and for female employees of 18 years or more in those parts of N.S.W. and Victoria situated within twenty miles from the chief post office at Mildura, including the districts of Mildura, Irymple, Merbein, Redcliffs, Wentworth and Curlwaa, and in the Renmark and other irrigation settlements in South Australia situated on or near the Murray shall be:—For adult males, £4/7/-, and for females of 18 or more, £2/18/- weekly, of 1/10⅝ for males and 1/3⅛ for females hourly.

In the Murrumbidgee district, including Leeton, the rates shall be £4/9/- and £2/19/6 weekly, and 1/11¼ and 1/3½ hourly. In all other parts of New South Wales the rates are to be £4/8/- and £2/18/6 weekly, and 1/10⅞ and 1/3¼ hourly.

In all other parts of Victoria than above specified, the rates shall be £4/3/-, £2/16/-, and 1/9⅝ and 1/2½ hourly.

In all other parts of South Australia the rates are to be £3/18/-, £2/12/- weekly, and 1/8⅜ and 1/1⅝.

The rates for juniors range from £1/4/- up to £3/6/6 for males under 15 up to 21 years, and for females from under 16 years at £1/12/- up to £2/2/- up to 18 years. Hourly rates for these employees are also fixed.

In fruit picking not more than one female of 18 years or more, and one juvenile shall be employed for each adult employed in fruit harvesting unless paid the adult wage.

The award is to operate as from yesterday, and is to remain in force for three years.

* * *

The award is said to have created dissatisfaction among employees. As females will now receive 30/- per week less than men, it is stated in union quarters that many men would be rendered unemployed. Calculation of wages on the hourly basis was also objected to.

Scott & Edwards

S. E. Scott, late Manager,
Fruit Dept., Denny's Lascelles
Ltd., Melbourne.

Shipments to United Kingdom
and the Continent.

Personal Supervision of
Consignments.

129 KING STREET
(opposite Wool Exchange).
MELBOURNE
Telephone: F 4970.

Hay Stack Covers

for covering hay stacks, etc., onions, wheat, wool, lucerne, etc., also as a tarpaulin.

Price: 3-Star.

12 x 20	£2	3	0
12 x 24	2	13	6
12 x 30	3	8	6
18 x 20	3	8	6
18 x 24	4	2	6
18 x 27	4	12	6
18 x 30	5	2	0
21 x 30	5	17	6
21 x 33	6	7	0
22 x 24	5	7	0

Price: 4-Star.

12 x 20	£3	1	6
12 x 24	3	15	0
12 x 30	4	11	0
18 x 20	4	11	0
18 x 24	5	9	0
18 x 27	6	3	0
18 x 30	6	15	0
21 x 30	7	17	6
21 x 33	8	12	6
22 x 24	6	14	6

Size 22 x 24, waggon size only, includes ropes; other sizes, ropes 3/6 extra.

Special Sizes Made to Order.

Also duck tarpaulins, verandah blinds, car covers, window blinds and all canvas goods. Please write for full list.

The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine St., Geelong, Vic.
Secondhand Sacks For Sale.
Manufactures of all Descriptions of Canvas Goods.

OBITUARY.

Sir Alfred Ashbolt, a prominent Tasmanian citizen, died at Hobart on January 24, at the age of 60 years. Sir Alfred was closely connected with the fruit industry because of codirectorship for several years, in the firm of Henry Jones & Co., Hobart. Later as Agent-General for Tasmania in London, he was active on behalf of his State and the Commonwealth generally. He was also associated closely with Tonghab Harbor Tin Dredging Co.

A Million Apples Packed For Export.
(ABOUT 6,500 CASES.)
Requires a Lot of Handling
Every Grower of 8,000 Cases or more should become familiar with
The "Lightning" Model 18

EIGHT SIZES. AUTOMATIC FEED HOPPER. ROLLAR TYPE SORTER WITH VARIABLE SPEEDS. LARGE SPRING FLOOR BINS. CULL RETURN BELT. SLIDING WOODEN CASE HOLDERS FOR RIGHT AND LEFT HAND PACKING. 1 h.p. ONLY REQUIRED. TWELVE LARGE PACKING BINS. TWO PACKING BINS FOR EACH OF THE FOUR MAIN SIZES.

For under 2¼—1 Bin 2 ft. wide.
,, small 2¼—1 Bin 3 ft. wide.
,, large 2¼—1 Bin 2 ft. 6in. wide.
,, large 2¼—1 Bin 3 ft. wide.
,, small 2½—2 Bins 3 ft. wide.
For large 2½—2 Bins 3 ft. wide.
,, small 2¾—2 Bins 3 ft. wide.
,, large 2¾—1 Bin 3 ft. wide.
,, 3 in. and over—1 Bin 3 ft. wide.

In handling a million or two of apples, a lot of time and money can be wasted. The only way in which this can be avoided is by having a machine specially designed for the purpose. Because there are so many individual apples to be sorted, sized, wrapped, packed and lidded in a short time, it is difficult to maintain a high standard of pack, and returns suffer. 1/- per case on 8,000 is £400.
The "Lightning" Model 18 removes all the difficulties associated with packing large quantities of apples in one quality, and provides for the Australian grower, a better machine than can be obtained in any other part of the world.
There is a "Lightning" for every size of pack of apples, pears, plums, etc.

THE "LIGHTNING" FRUIT GRADER CO.
5 Hoddle Street Collingwood, N.9., Melbourne, Vic.
Cable and Telegraphic Address:—"LIGHTNING," Melbourne.

PRUNING FRUIT TREES.

A BULLETIN was recently issued by the New York Agricultural Experiment Station, showing the growth and yield of Apple trees pruned in various ways. A summary of the bulletin is as follows:—

1. Unless considerable care is taken in the formation of a high head for an Apple tree, the removal of so much wood may be necessary as to impair the vigor of the tree as well as to check its development.

2. A few years after planting low-headed trees were from one to three years ahead of high-headed ones in point of size and vigor.

3. High-headed trees were less stocky in trunk and branches, and had smaller tops than low-headed ones. Because of the tall trunks such trees were so twisted and bent by the action of winds as to cause them to lean badly after a few years.

4. Trees headed high had smaller bearing areas for fruit production, and, therefore, yielded smaller crops.

5. Low-headed trees were more amenable to orchard operations, such as pruning, spraying, and picking the fruit. With the use of modern implements tillage operations were relatively easily performed.

6. The height of the head did not influence the characters of the fruit produced. The low head was larger in area and the amount of bloom was greater, but blossom fertilisation seems to have been so impaired that there was no increased fruit production.

* * *

Commenting on the foregoing, Mr. J. H. Lang, who perused the bulletin, advises as follows:—

"The results obtained from little versus much pruning and winter v. summer pruning were on the whole negative. Low heads were proved more productive than high heads, but this is already recognised in Australia, and the high heads (4ft.) as in America are unknown here."

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

"FRUIT WORLD" APPRECIATION.

Mr. T. Somerville, Strathfieldsaye, writes:—We thank you for the "Fruit World," which contains very useful information for the orchardist.

ROYAL EASTER SHOW, SYDNEY.

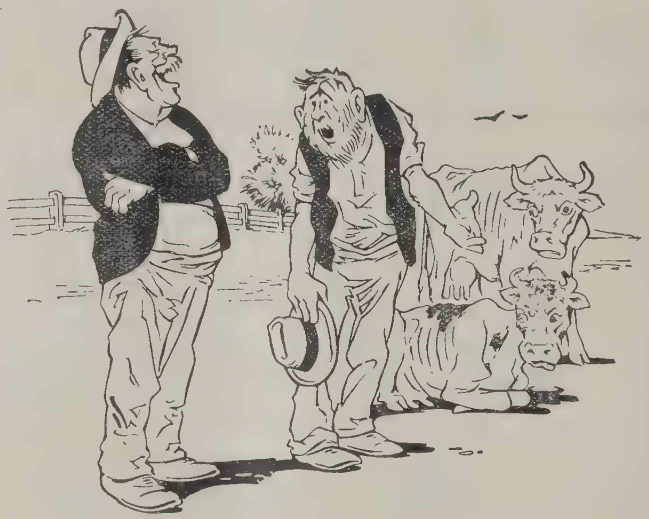
The Annual Show of the Royal Agricultural Society of New South Wales, will be held from April 15 to 26, 1930, at Moore Park, Sydney. The Show will be open for eleven days and five nights.

There is an attractive fruit schedule, including special classes for export Apples and dried fruits. The prize money in all fruit classes is very liberal. Schedule and entry forms are available on application to the Secretary, Mr. G. C. Somerville, Endeavor House, 33 Macquarie-place, Sydney.

In the special export Apple section entries close on March 14.

Tasmanian growers speak appreciatively of the helpful lectures given by officers of the Agricultural Department.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE." 499 LITTLE COLLINS ST.
MELBOURNE.



How You Would Laugh

—if a dairy farmer told you that because of a drop in the price of butter fat, he intended to give his cows less feed, and so reduce the "cost of production." But would you laugh if a fruit-grower said that due to market conditions, or the ravages of some pest, he was going to leave Nitrogen out of his fertiliser programme on the plea of expense. Yet they're parallel cases. To maintain an orchard or a farm at its maximum of profit, regardless of the state of the market, the soil must be fed properly. To ignore Nitrogen is to underfeed the soil. The use of

SULPHATE OF AMMONIA

Australia's Premier Nitrogenous Fertiliser, is the easiest and most practical method of Nitrogen restoration.

Supplies of Sulphate of Ammonia can be had from all Fertiliser Manufacturers or their Agents.

Literature from

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE
360 Collins Street, Melbourne.

Fighting Insect Pests in the Orchard.

Rutherglen Bug.

Owing to the hot weather, these troublesome insects have made their appearance on fruit trees, especially Peaches, Apricots, etc. The following sprays could be used against them, viz.:—Tobacco sprays, benzole emulsion or phenyle spray. The latter is prepared as follows:—Take 1 quart of phenyle, 3 lbs. washing soda, 1 bar yellow soap, 40 gallons water. Shred the soap and dissolve it in hot water, to which the other ingredients should be added, and the mixture made up to 40 gallons.

Apple Root Borers.

These insects are still to be found in Apple orchards. A spraying with arsenate of lead will keep them in check. Jarring the trees over an old piece of blanket or sheet will cause beetles to drop. Pick them up and destroy same.

Looper Caterpillars.

The greyish colored looper is again in evidence this season in quite a number of orchards. They are particularly destructive to young Apples, especially late varieties. Spray same as for Apple root borer.

Codlin Moth.

Examine bandages and destroy grubs. Continue white oil sprays.

For further particulars re codlin moth, see "The Fruit World," December 1, 1929, page 496c.

Pear and Cherry Slug.

Continue spraying with arsenate of lead or using lime, soot or sand, to destroy larvae. See "The Fruit World," December 1, 1929, page 496c.

Plum and Cherry Borer Moth.

When sawdust-like material is noticed on outside of tree, remove same so as to expose tunnel made by grubs. Place little bisulphide of carbon into tunnel, and cover over with soap or clay to prevent fumes from escaping.

Black Aphids of Cherry.
Woolly Aphis Parasite (Aphelinus).
Painted Apple Moth.

See "The Fruit World," December 1, 1929, page 496c.

Full of Joy.

Policeman: "This is the third time I've caught you."

Jovial Motorist: "Ha! And now I suppose you think I'm yours for ever!"

FRUIT DISTRIBUTION IN GREAT BRITAIN.

Advices are to hand regarding the extension to the old-established business of Messrs. Geo. Monro Ltd., Covent Garden Market, London, and Smithfield Market, Manchester.

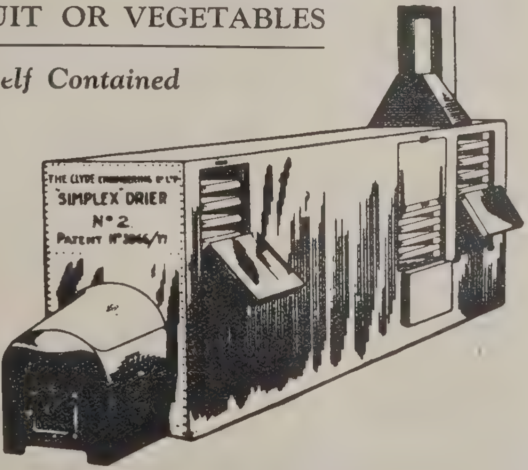
The chief agent in Australia, Major H. Dakin, Goldsborough House, Macquarie-place, Sydney, advises that this firm has branches in Birmingham, Glasgow, Worthing, Spalding and Hull. The firm, which was established in 1862, sells on commission by private treaty only.

TAYLOR'S ANNIVERSARY RED PEACH.

Specimens of the new late dessert Peach, Taylor's Anniversary Red, were received by the editor on January 21 from Mr. R. H. Taylor, of Concord, on behalf of Messrs. Swane Bros., Enterprise Nurseries, Ermington, N.S.W.—this firm being the distributors of the trees.

The Peaches were enjoyed. It is a slipstone dessert Peach, colored red round the stone. The flesh is firm for transport. It has a full rich flavor and should prove an acquisition.

The Clyde Simplex Driers
For Drying
Fruit Vegetables and other Products
NO MORE WASTE FRUIT OR VEGETABLES
Simple · Self Contained
Made in Sizes to Suit
Householders
Small Orchardists
or
Large Factories
The
Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.


THE CLYDE ENGINEERING Cº LTD.
"SIMPLEX" DRIER
N° 2.

COOPER PRODUCTS

I UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

N.S.W.—
William Cooper & Nephews (Australia) Limited, Sydney, and Agents.

Victoria—
Cooper Engineering Co. Ltd., Melbourne.

Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

DRIED FRUITS BOUNTY.

Big Meeting at Red Cliffs.

A.D.F.A. Plans Not Approved, and Committee Formed to Draft New Proposals.

OVER 300 GROWERS met at Red Cliffs on January 7 to discuss the question of the proposed bounty on dried fruit: opinions were divided.

It was finally resolved:—

> That while supporting the principle of a bounty on dried fruits, this meeting of Red Cliffs growers cannot accept the basis of the scheme submitted by the Board of Management to the Prime Minister.

* * *

The meeting was addressed by Mr. P. G. Stewart, M.P., and Mr. P. Malloch. Mr. Stewart said a guarantee of £250,000 had been suggested. The Prime Minister would not agree to a bounty involving an indefinite sum.

Mr. Malloch said the dried fruits industry produced £5,000,000 worth of fruit and carried a population of 35,000. The industry was carried on under Arbitration Court awards, and yet had to export 80 per cent. of the fruit in competition with other countries. Finance was difficult. Stability was needed. We were up against low priced Californian fruit. We needed a continuance of the Canadian trade treaty and preference in the U.K. The scheme submitted to the Prime Minister involved an equalisation fund for 3 years to offset gains one year against losses another year, the grower to receive basic production costs: growers to be issued negotiable certificates to draw against surpluses.

Mr. Malloch explained the plans in detail and answered many questions.

A Committee of ten growers was appointed to confer with the A.D.F.A. Committee and to formulate a scheme for submission to the Government.

A further resolution was carried, on the motion of Messrs. J. Aldred and G. Gilley:

> "That this meeting urges upon the Commonwealth Government the necessity for an increase of constitutional powers over trade and commerce to permit of effective Federal control of the dried fruit industry."

Grafting Grapes.

GREATLY IMPROVED quality, and increased yields of fruit are the chief advantages to be gained by grafting desirable varieties of Grapes on hardy root stocks, says F. E. Gladwyn, Grape specialist of the Geneva Experiment Station (U.S.A.), who has been conducting experiments with grafted Grapes for the past several years.

Such well-known varieties of American Grapes have certain defects which detract from their value as commercial possibilities, says Mr. Gladwin. Some of them set more fruit than they can mature; some are erratic in their bearing habits and are oversensitive to soil conditions; while some have the "off-year" habit to a marked extent or tend to "run-out" or deteriorate in yield and quality. Although grafting is not a cure-all, many of these defects have been overcome by grafting these varieties on hardy root stocks, says this authority.

Several standard varieties of Grapes were bench-grafted by the slip-and-tongue method on selected root stocks. Records have now been obtained for a sufficiently long time to show that Grapes can be materi-

Clean Trees - Bigger Yields - Bigger Profits

Citrus "Zyklon" or "Cyca" Briquettes

THE IMPROVED FUMIGANTS will do this

CITRUS "ZYKLON" IS LIQUID HYDROCYANIC ACID GAS in a handy portable form. "CYCA" BRIQUETTES are a high-gas-content Calcium Cyanide in tablet form. Both are bought, sold and used on their guaranteed HCN gas content. A quick, high concentration is essential for successful citrus fumigation.

BOTH "ZYKLON" and "CYCA" GIVE YOU THAT.

Investigate these products before placing your order for fumigation this season.

For fuller particulars:

HOUGHTON & BRYNE

HEAD OFFICE:
2 Bridge St.,
Sydney.

46 Elizabeth St.,
Melbourne.

12 T. & G. Building,
Brisbane.

105 King William St.
Adelaide.

ally improved in quality, that yields can be increased, and that more vigorous vines can be obtained by bench-grafting desirable varieties on suitable root stocks.

The cost of grafting is still a handicap to the method coming into practical use. Grape growers, however, are urged to give the method a trial on a small scale. Certainly, in small vineyards, for home use, grafted vines are to be preferred to those propagated by cuttings.—"American Nurseryman."

Royal Agricultural Society of New South Wales

Royal Easter Show

MOORE PARK, SYDNEY

15th to 26th April, 1930

ELEVEN DAYS — FIVE NIGHTS

£14,000 **PRIZES** £14,000

Attractive Fruit Schedule. Special Classes for Export Apples and Dried Fruits. Very Liberal Prize Money in all Fruit Classes

ENTRIES CLOSE: FRUITS (Including Royal — Special Export Classes)—14th March —

Schedules and Entry Forms on Application

Endeavour House, 33 Macquarie Place, Sydney. G. C. Somerville, Sec.

AUSTRALIAN DRIED FRUIT SALES OVERSEAS.

According to advices received by the Commonwealth Dried Fruits Control Board from its London Agency, sales of Australian Dried Fruit in Great Britain for the week ending January 16 totalled 499 tons, valued at £16,560.

Details are:—290 tons Sultanas, averaging £35/14/4 per ton; 93 tons Currants at £38/0/8, and 116 tons Lexias at £23 per ton.

Shipments to date, 48,649 tons, sold 33,789 tons, unsold or afloat, 14,860 tons.

Flex-o-Glass.—Flexo-o-Glass is a strong, durable fabric for use in place of glass. It is excellent for propagating houses, fruit rooms, poultry houses, etc., and can be nailed in position. Flex-o-Glass admits the healthful ultra-violet rays of the sun, and is splendid for raising Tomatoes. Supplies are obtainable from agents in the several States, as published in the advertisement in this issue, or direct from Clark, King & Co., Guildford-lane, Melbourne.

"HARVEY"
Tunnel Dehydrator

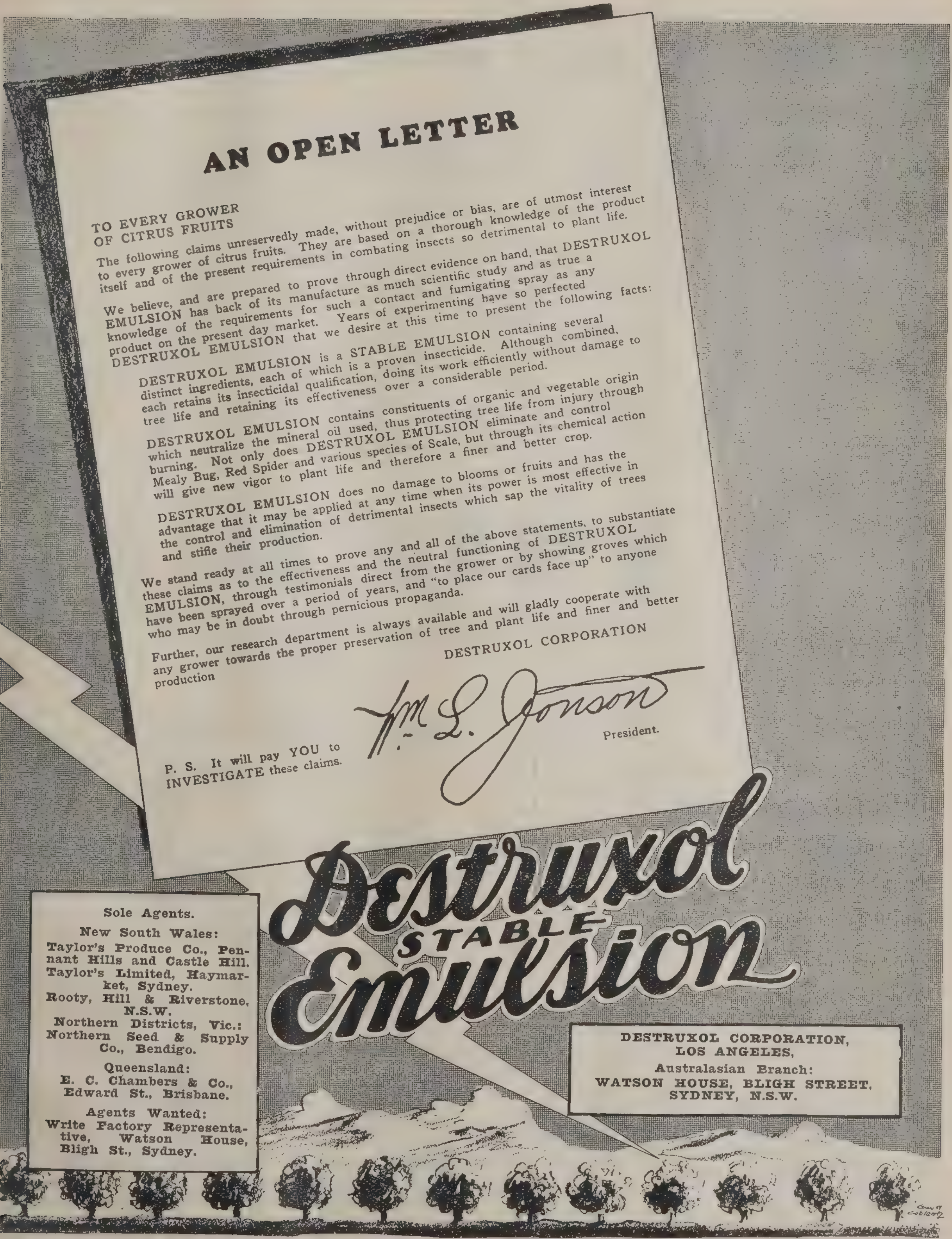
The
Latest Idea
in
DRYING
FRUIT
VEGETABLES
and
Other Products

WRITE FOR PARTICULARS TO

D. HARVEY

ORCHARD & VINEYARD IMPLEMENT SPECIALIST.
FRUIT GRADERS & DEHYDRATORS.
POWER LIFT, TRACTOR, FARM & ORCHARD IMPLEMENTS.
BOX HILL, E.11. - - VICTORIA
AGENTS ALL STATES

D. HARVEY
DEHYDRATOR



AN OPEN LETTER

TO EVERY GROWER
OF CITRUS FRUITS

The following claims unreservedly made, without prejudice or bias, are of utmost interest to every grower of citrus fruits. They are based on a thorough knowledge of the product itself and of the present requirements in combating insects so detrimental to plant life.

We believe, and are prepared to prove through direct evidence on hand, that DESTRUXOL EMULSION has back of its manufacture as much scientific study and as true a knowledge of the requirements for such a contact and fumigating spray as any product on the present day market. Years of experimenting have so perfected DESTRUXOL EMULSION that we desire at this time to present the following facts:

DESTRUXOL EMULSION is a STABLE EMULSION containing several distinct ingredients, each of which is a proven insecticide. Although combined, each retains its insecticidal qualification, doing its work efficiently without damage to tree life and retaining its effectiveness over a considerable period.

DESTRUXOL EMULSION contains constituents of organic and vegetable origin which neutralize the mineral oil used, thus protecting tree life from injury through burning. Not only does DESTRUXOL EMULSION eliminate and control Mealy Bug, Red Spider and various species of Scale, but through its chemical action will give new vigor to plant life and therefore a finer and better crop.

DESTRUXOL EMULSION does no damage to blooms or fruits and has the advantage that it may be applied at any time when its power is most effective in the control and elimination of detrimental insects which sap the vitality of trees and stifle their production.

We stand ready at all times to prove any and all of the above statements, to substantiate these claims as to the effectiveness and the neutral functioning of DESTRUXOL EMULSION, through testimonials direct from the grower or by showing groves which have been sprayed over a period of years, and "to place our cards face up" to anyone who may be in doubt through pernicious propaganda.

Further, our research department is always available and will gladly cooperate with any grower towards the proper preservation of tree and plant life and finer and better production

DESTRUXOL CORPORATION

Wm. L. Jonson
President.

P. S. It will pay YOU to INVESTIGATE these claims.

Sole Agents.

New South Wales:
Taylor's Produce Co., Pennant Hills and Castle Hill.
Taylor's Limited, Haymarket, Sydney.
Rooty, Hill & Riverstone, N.S.W.

Northern Districts, Vic.:
Northern Seed & Supply Co., Bendigo.

Queensland:
E. C. Chambers & Co., Edward St., Brisbane.

Agents Wanted:
Write Factory Representative, Watson House, Bligh St., Sydney.

DESTRUXOL CORPORATION,
LOS ANGELES,
Australasian Branch:
WATSON HOUSE, BLIGH STREET,
SYDNEY, N.S.W.

South Australian Distributors:—**OVERSEAS EXPORT CO.**, 25 King William St., Adelaide.
Tasmanian Distributors:—**FERGUSON & CO. PTY. LTD.**, 10 Murray St., Hobart.
Sole Distributors, Wangaratta District, Victoria:—**J. P. LARKINGS**, 49-51 Murphy St., Wangaratta, Vic.

Now is the Time to Clean Up

Citrus Pests!

Use VOLCK at 2%. This will control all scale insects also black and green apis. Citrus Apis is easily killed with VOLCK at 1½%. Use plenty of spray—thoroughly wet the trees inside and out. VOLCK will not burn or damage the most tender or delicate foliage.

VOLCK

The Proven Spray

There is no need for the Grower to Experiment

Mr. Volck and his many research entomologists have for twenty years been experimenting for growers—VOLCK is a Proven Spray. Thousands of tests have proven it. Remember—there is substitute for VOLCK

Volck has had many successes in Victoria

SHEPPARTON,
KYABRAM
IRYMPLE,
HARCOURT
ETC., ETC.

Letters

We hold many letters expressing complete confidence in VOLCK. These may be inspected in our office. Results will convince you too that VOLCK will render your orchards and groves free from fruit tree pests.

Write for Particulars Now

Victorian Agents: H. C. PANNIFEX & CO., 26 Market Street, Melbourne.

New South Wales Agents: THE AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Sydney.

Queensland Agents: THE AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Brisbane.

Tasmanian Agents: W. H. IKIN & SON, Hobart.

South Australian Agents: SILBERT, SHARP & BISHOP, Rundle Street, Adelaide.

West Australian Agents: PATERSON & CO., Perth.

STERILISED DRIED FRUITS.

Important Success With Shipment to England in Special Container.

MUCH satisfaction has been expressed at the success of the shipment of sterilised dried fruits to England in special containers, as it is believed this opens the way for large commercial developments.

During last season a trial shipment of Sultanas, Lexias and Currants was made to London, under the supervision of the Commonwealth Dried Fruits Control Board, and with the active cooperation of the Hydro-Vacuum Co. Ltd., of Ingles-street, Port Melbourne.

The dried fruit was sterilised in the Hydro-Vacuum kilns and placed in special containers made of wood pulp in a patented moulding process. These containers are water-tight, and are stated to be much cheaper than tin-plate containers.

The fruit, on arrival in England, was subjected to searching tests and was in every way satisfactory.

The object of this experiment was to make further tests of the efficiency of the insect-proof containers provided by Mr. Doutre, of Messrs. Spicers Ltd.

1. Samples of fruit from some of the containers which had been opened on October 11, were brought to the research laboratory at Slough and were placed in sealed jars in an incubator. These samples were examined on November 15, 1929, with the following results:—

(See page 85)

The period of a month, which has been allowed for incubation of the fruit, allowed sufficient time for any eggs to hatch which might have been laid previously, and it may be assumed that there was no insect life in the samples taken.

2. Three new containers were packed with Sultanas taken from some of the containers used for the experimental shipment. These were sealed with gummed paper and brought to the laboratory at Slough. Here they were placed in a large breeding cage containing fruit infested with **Plodia interpunctella HB.** and **Oryzaephilus surinamensis L.**

An open jar of the same fruit was placed in the breeding cage to act as a control. The containers and the control jar were examined on November to act as a control. The containers and the control jar were examined on November 20, 1929, with the following results:—No. 1, clean; No. 2, clean; No. 3, clean; control jar: 1 Plodia adult, 8 Plodia larvae, 9 Oryzaephilus beetles, 1 Oryzaephilus larvae.

* * *

A shipment on a commercial scale is being organised during the coming export season, and it is expected that fruit will be placed in containers of moderately small size to interest householders, as well as the larger size containers for the grocery trade.

Tomato Growers

What's the Early Market Worth to YOU?

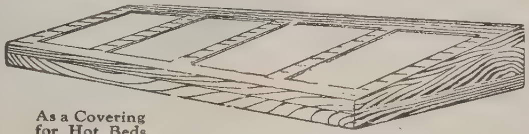
Here are some facts and figures that will open your eyes. During October and November last, tomatoes were sold in the Western Market, Melbourne, for 34/- and £1/5/- per half case. This was at the start of the season. As the season advanced, however, growers were eager to accept as low a price as 2/6 per case.

That means that the man who got the early market made a minimum profit of £3/5/6 per case over the man who got there late!

Obviously then, immense profits await the grower who can catch the early market.

Growers who grow under glass can catch this profitable market, but at great expense. Growers who use hessian **may** catch the early market at the expense of great labor.

Growers who use Flex-o-glass, can catch the early market cheaply, easily and certainly.



As a Covering for Hot Beds

Flex-o-glass fitted on your hot-beds works wonders. It is a fabric, specially made and chemically treated. It admits the healthy ultra-violet rays of the sun, which glass and hessian shut out and thereby doubles the growth of plants under it.

It keeps out frosts entirely. There has never yet been a case of plants suffering from frosts while under Flex-o-glass.

It cannot be torn, broken or cracked. It is waterproof and weatherproof. It does not chill like glass and keeps out all draughts and insect pests. It has been known to advance the growth of plants by 5 or 6 weeks and yet make them twice as big, and stronger and healthier.

Agricultural and Horticultural Colleges and experts use and recommend Flex-o-glass.

It costs less than glass, both to buy and to instal. It is just tacked into place and may be cut with scissors to any required length, size or shape. You can instal it yourself in a few minutes, and it will never need replacing. There are 500,000 satisfied users, using between them over 4,000,000 yards of Flex-o-glass to-day, and are reaping its wonderful benefits. The Curator of Melbourne Parks and Gardens uses this amazing fabric exclusively.

You too, if you want to share in the remarkable profits of the early markets should instal Flex-o-glass. Get there first next season—and get £2/10/- a half case yourself! It's a waste of time to grow tomatoes at 2/6 a case—but at 50/- a case it's a wonderfully profitable venture.

Fit Flex-o-glass and reap the profits.

Minimum of 3 Yards by Post. 2/6 yd. 36in. Wide. Carriage Extra.

Obtainable Direct or From:

Gill & Searle Pty. Ltd., Elizabeth St., Melbourne.
Ormond Plant Farm Pty. Ltd., Ormond, & Flinders St., Melbourne, C1.
James Railton, Swanston St., Melbourne.
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Ask any of the above for a FREE LEAFLET on FLEX-O-GLASS, or post the coupon below, to

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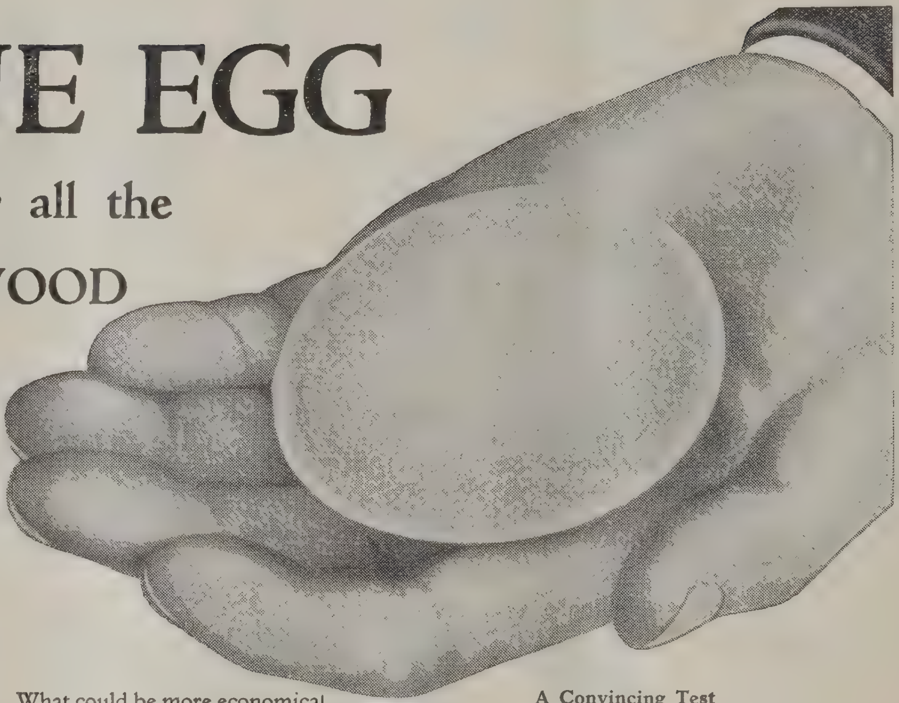
Please send me your FLEX-O-GLASS Leaflet.

Name ....

ADDRESS ....

ONE EGG

pays for all the KARSWOOD a bird needs in 2 months !



Just think of it! What could be more economical and what more satisfactory? For that little dash of Karswood Poultry Spice (containing dried and ground insects) in the mash, can make all the difference in the world. Your birds will show not only a surprising improvement in general health and condition but also a marked increase in egg-production. This will be not a temporary forced increase. Karswood does not force, because it contains no forcing ingredients, such as gentian, chillies, and cayenne pepper. It coaxes gently and stimulates the birds to more active laying. Feed Karswood regularly, and the increase will be a permanent one.

"Always have Eggs—Winter and Summer"

Dear Sir:

I received your book (The Bestway Poultry Book) for which I thank you.

I would like to let you know what results I have got out of your Karswood Poultry Spice. I first gave it to 9 Black Orpington Pullets 6 months old, they were laying 5 to 6 eggs per day, but after a fortnight of Karswood Spice I got 7, 8 and 9 eggs per day and they kept same up for the winter months. I now give it to all my fowls with the result I always have eggs winter and summer, and again my fowls always look healthy. Different travellers who have called at my place say they have never seen fowls in all their travels that look as healthy as mine.

Again thanking you for your great help.

I might say you can use this as you like.

(Sgd.) GEO. McDERMOTT,
6/6/29. *Amphitheatre, Vic.*

A Convincing Test

Dear Sir:

I have been using Karswood Poultry Spice for the last four years. I keep about 300 Poultry, half of them free range and the other half on the intensive system. The ones on the intensive system are in five different compartments of 30 birds in each, all White Leghorns, equal in type and age. The three compartments Karswood fed in three months average:—

Jan.	601	*per compartment*	30	*birds*
Feb.	589	,,	,,	,,
Mar.	565	,,	,,	,,

Two compartments without Karswood Spice average for same period:—

Jan.	397	*per compartment*	30	*birds*
Feb.	325	,,	,,	,,
Mar.	298	,,	,,	,,

A reduction of 735 eggs.

Yours faithfully,
(Sgd.) W. UNSWORTH,
Thomas Estate, Shepparton,
20/5/29. ***Victoria.***

Make This Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1 – packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results —Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices: ½lb. packet 1/–; 1lb. packet 2/–; 7lb. tin 13/–; 14lb. tin 25/–; 28lb. tin 48/–.

5M.29

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

RESULTS OF DRIED FRUIT SHIPPING TEST. (See page 83).

Weight of sample, approx.:	Type of fruit.	Particulars of sample.	Condition of fruit.
¾ lb.	Currants	From round carton ex wooden box	Clean
¾ lb.	Lexias	From round carton ex wooden crate	Clean
¾ lb.	Currants	From round carton ex wooden crate	Clean
¾ lb.	Sultanas	9 lbs. carton box ex wooden box	Clean

Poultry Notes for February.

"ONE of the first considerations in the New Year is the matter of stock-taking."

"This is essential to enable the poultry-farmer to sum up his position," says Mr. E. Hadlington, N.S.W. Poultry Expert.

"It is surprising," he adds "to find so many poultry-farmers who do not have an annual stock-taking, and can only guess at the numbers of stock they are carrying, yet this information is vital if they wish to arrive at the financial position of the farm and to sum up future prospects."

The easiest way to count poultry is to shut them in the houses overnight and count them as they are let out in the morning.

If it is not possible to shut them up, it is quite easy to make a count in the yard by working them to one side and counting as they go past.

In taking stock it is necessary to know the different ages of the birds kept, and for this purpose the birds of each year should be marked with distinguishing rings. This should be done before the pullets reach the adult stage.

If desired, the pullets can be left without distinguishing rings, provided the other hens are marked.

After tabulating the number of stock of different ages it will then be possible to say what laying stock is worth keeping for the coming year.

On a farm carrying a regular number of layers there should be about 15 per cent. more pullets than first-year hens, in order to allow for normal mortality among the hens during the year and for culling.

In conjunction with the information regarding numbers of stock, it is essential to have a few simple records concerning the income and expenditure to enable a summing up of the position.

In this connection the following are the main items:—(1) Cost of feed used; (2) income for the year; (3) stock or plant purchased; (4) cost of additional buildings; (5) number of eggs disposed of.

Beekeeping.

Re-queening.

"ATTENTION must be given in the autumn to replacing queens which are found to cease breeding early in colonies in normal condition with ample food," states Mr. E. A. Earp, Senior Apiary Instructor, Wellington, in the "New Zealand Journal of Agriculture." In all probability they are too old or have been injured in some way. In any case they require to be superseded as soon as possible by young queens. It is a good plan to rear as many queens as possible and have them cared for in nucleus colonies, later to be introduced to full colonies where needed. It is in the spring that young queens reared in the autumn prove so valuable. Their laying powers are at their best, consequently the colonies build up rapidly; moreover, there is less tendency for the bees to swarm.

Autumn Feeding.

In some districts, after the main honey-flow is over, a fair amount of nectar is gathered, sufficient to keep the bees breeding, and for them to store a little surplus. However, where weather conditions are not favorable, the colonies' needs may require to be supplemented in order to promote late breeding. Too often beekeepers are tempted to extract too close when making the final extraction; consequently the sudden curtailment in the food-supply checks breeding, and the colony goes into winter weak in young bees. The amount of stores in the hives is of paramount importance, and the first thought of the beekeeper in the autumn should be that of food-supply. There should be at least 30 lbs. to 40 lbs. of honey in each hive; and where there is this quantity or more, and it appears to be diminishing rapidly, the colonies should be additionally fed. It must be remembered that it is in the autumn that the beekeeper lays down the foundation for his next season's crop; consequently he must concentrate on wintering his bees in the best condition possible.

"The Australasian Beekeeper"

The leading Bee Journal in the Southern Hemisphere.

A monthly magazine entirely devoted to beekeeping. Published in Australia for Australian Conditions. Subscription (5/- per year, prepaid, post free), may start now.

Free sample copy available on application to the publishers, Pender Bros. Ltd., Box 20, West Maitland, N.S.W.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.
Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
McKean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
H. Wilson, Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.
Young, J. H. & Co. Pty. Ltd., Western Market.

QUEENSLAND.

Brisbane.
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J. & Co., Fruit Markets.

TASMANIA.

Hobart.
E R. Cottier Pty. Ltd., 88 Collins St.
Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Launceston.
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.
Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull.
Connelly Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.
Manchester.
The Port of Manchester, rep., W. J Wade. 8 Bridge Street. Sydney.
Liverpool.
MacGeorge & Jardine.
Woodall & Co.
Bristol and Southampton.
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin.
Connelly, Shaw Ltd.
Glasgow.
Russell, Turnbull & Co.

GERMANY.

Bremen.
Fruchthandel, Gesellschaft.
Hamburg.
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam.
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen.
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

Overseas Markets.

Great Britain.

London (Covent Garden) (19/12/29).—Apples—Blenheim, 6/- to 10/- bushel; Oregon Newtown, 17/6 to 20/- per case; Spitzenberg, 12/- to 13/-; Jon., 11/- to 13/-. (Spitalfields)—Apples: B.C. Jon., 9/- to 13/- per box; Oregon Newtown, 14/6 to 18/-; Pears, d'Anjou, 18/- to 22/-; Comice, 12/- to 16/- half-box.

Glasgow.—Apples: Winesap, fancy, 11/6 to 12/6; ex. fancy, 12/6 to 13/-; Jon., fancy, 11/6 to 12/6; ex. fancy, 13/- to 13/6; R.B., 9/6 to 10/6 and 11/-; Pears, Cal. W.N., half-box, 13/- to 14/-; cases, 24/- to 26/-.

Hull (Commercial Sale Rooms, 19/12/29).—Washington Winesaps, ex. fancy, 175's, 11/3 to 11/6; 216's, 10/-; Oregon Newtowns, ex. fancy, 200's, 16/6 to 17/-; fancy, 15/6 to 16/-.

Liverpool (18/12/29).—Oregon Newtown, ex. fancy, 19/- to 21/-; Pears, W.N., 15/- to 18/- per box; Oranges, Val., extra quality, 240's, 13/-; 300's, 9/6 to 10/-.

Manchester (17/12/29). — Apples, English, 14/- to 18/- cwt.; Cal. Newtown, 17/- to 18/-; Oregon Newtown, 18/- to 20/- box: B.C. Jon., 13/6 to 16/-; McIntosh Red, 14/- to 16/-; Winesap, 12/- to 15/-; Del., 14/- to 16/-.

Newcastle-on-Tyne (17/12/29). — Valencia Oranges, 420's, 16/- to 17/6; Washington Winesap, 10/- to 12/6 per box; B.C. Jon., 11/- to 12/3.

GERMANY.

Hamburg, 5/12/29.

Messrs. Ph. Astheimer & Sohn report offering 17,259 boxes and 1,633 barrels of American Apples. Jonathans were of good quality, and in keen demand: Ortley and Spitzenberg also of fine quality. Winter Bananas not selling so well as in former seasons. Prices: Ortley ex f., 125/175, 15/-, 20/3; fancy, 14/-, 16/-; Spitz., ex f., 138/163, 16/3 to 17/6; Arkansas Blk., ex f., 125/163, 13/3 to 15/3; fancy, 12/9 to 14/9; Jon., ex f., 138/163, 16/6 to 17/6; 175/216, 13/- to 15/9; fancy, 11/9 to 14/3. Winter Bananas, ex. f., 11/9 to 15/9; fancy, 8/- to 10/6.

New Zealand.

Dunedin (16/1/30).

Messrs. Reilly's Central Produce Mart Ltd., report:— Prices were as follows:—Strawberries, choice 1/1 to 1/6, jam Strawberries 9d. to 1/-; Apricots, cases 6/- to 10/6, crates 7d. to 9d.; Peaches, cases 3/6 to 6/6, crates 2½d. to 5½d. lb.; Cherries, choice 1/1 to 1/6, ripe 6d. to 10d.; Raspberries, 10d. to 1/- pottle, buckets 9/- to 10/6; Loganberries, 8d. to 10d. pottle; Black Currants, 4½d. to 5½d.; Red Currants, 4d. to 6d.; Cherry Plums, 1½d. to 3d. Local Grapes, 2/- to 2/3; Plums, dessert 6d. to 8d., cooking 3/6 to 5/6; Apples, Beauty of Bath, 6d. to 8d.

Victoria.

Melbourne (30/1/30).

The following are the wholesal prices ruling at the Western Market. Per case: Apples, good to choice eating, 3/- to 6/-; well colored Gravensteins, higher; cooking, 2/- to 4/-; Apricots, 2/- to 4/-; Bananas, green, Queensland, special, 26/-; choice, 24/- to 25/-; standard, 18/- to 23/-; plains, 14/- to 17/- per double case; Lemons, 5/- to 12/-; Nectarines, 4/- to 9/-; Common Oranges, best to 30/-; lower grade and green, from 10/- per case; Passion Fruit, New South Wales, 5/- to 10/- per half case; Pineapples, Queen's, good counts, colored, 20/- green, 15/- to 18/-; larger counts, 12/- to 14/-; roughs, 9/- to 11/- per double case; Pears, 4/- to 5/-; few good green, 6/- per case; Plums, cooking, 2/6 to 4/-; dessert, 4/- to 7/-; Peaches, white flesh, 6/- to 10/-; Clings, almost unsalable; Tomatoes, Victorian, 10/- to 17/-.

The market representative of the Federal Citrus Council of Australia reports that prices were as follow:—Selected Valencias, best counts t 32/-; choice, to 26/-; medium, 16/- to 20/-; lower grades, from 8/-; Victorian Lemons, best counts, 12/-; Victorian Grapefruit, 16/- to 24/-.

West Australia.

Perth (24/1/30).

Apples, Williams, flats 6/- to 8/-; dumps 10/-; Dunn's Seedlings, dumps 8/- to 10/-; Cleopatras, flats 8/- to 10/-; Plums, Satsuma, flats 5/- to 8/6; Burbanks, flats 2/6 to 5/-; Wickson, flats 6/- to 8/-; October Purples, flats 4/- to 5/6; Black Diamond, flats 8/- to 11/-; Pears (cooking), dumps 3/- to 4/6; Bartletts, dumps 6/- to 8/6; Oranges, Valencias, flats, medium grade 9/- to 12/-; large grades, flats 5/- to 7/-; Peaches, best flats 12/- to 17/6; others, flats 8/- to 10/-; Apricots, flats, best 10/- to 14/-; others, flats, 8/-; Passion Fruit, flats 6/- to 8/-; Nectarines, large, flats, 10/-; others, flats 4/6 to 6/6; Lemons, flats 10/- to 13/-; large grades, flats 7/-.

Tasmania.

Hobart (25/1/30).

The fruit market at Hobart is well supplied and the demand is good. Sales were made at the following prices:—

Cherries, choice Florence 20/- to 25/9; medium quality do., 14/- to 18/-; White Hearts and Biggareau varieties 8/- to 12/6; dark varieties, 1/6 to 2/6; light sorts, 1/6 to 2/3; all per half case. Peaches, per tray, 2/- to 3/6; ditto, 3/6 to 6/6 per half case; Strawberries, 9d. to 1/- per punnet. Apples, Gravensteins, 3/- to 7/-; Alexanders, 4/- to 5/6; Beauty of Bath, 3/- to 7/-; other cooking sorts, 3/- to 4/6 per case. Tasmanian Tomatoes, 12/6 to 18/- per half case; Victorian Tomatoes, 10/- to 16/- per case.

South Australia.

Adelaide (25/1/30).

Apples (eating), 4/- to 6/- case; do. (cooking), 3/- to 4/-; Apricots, 10/-; Bananas, 30/- to 32/- per crate; Currants (red), 5/- doz. lb.; do. (black), 10/-; Lemons, 20/- to 24/- case; Loganberries, 5/- doz. lb.; Melons (Water), 25/- cwt., Nectarines, 6/- to 10/- case; Nuts (Almonds), 10/- doz. lb.; Oranges, 15/- to 17/- case; Peaches, 6/- to 8/-; do. (Clingstone), 8/-; Pears (eating), 6/- to 8/-; do. (cooking), 5/-; Plums (light), 4/- to 5/-; do. (dark), 4/- to 5/-; do. (Japanese), 6/- to 8/-, Raspberries, 5/- doz. lb.; Strawberries, 8/- to 10/-. Prices are without cases.

Queensland.

Brisbane (24/1/30).

Oranges, 4/- to 9/- a bushel case; Lemons, 4/- to 6/- a quarter-case; Mangoes, local 1/- to 4/- a case, northern 3/- to 5/-; Passion Fruit, 3/- to 5/- a quarter-case; Papaws, flat Orange cases 2/- to 5/-; dumps 2/- to 4/- and 1/- to 1/6; Pineapples, 8/- to 14/- a case, inferior 5/- to 7/-, rough 5/- to 7/-; Rock Melons, 1/- to 5/- a dozen; Water Melons, 1/- to 10/-; Peaches, 2/6 to 4/- a half-bushel case; Plums, 2/6 to 6/-, and 8/- to 10/-; Nectarines, 1/- to 7/6; Apples, eating 7/- to 9/- and 2/6 to 6/- a bushel case; cooking 3/- to 9/-; Pears, 4/- to 10/-; Grapes, 2d. to 3½d. per lb.; Figs, 6/- to 9/- a dozen boxes.

New South Wales.

Sydney (24/1/30).

Apples.—Local, dessert, 6/- to 16/-; Queensland Jonathans, 16/- to 18/-; Gravensteins, 8/- to 12/-; cooking, 4/- to 10/-; jam, 2/- per bushel case. Bananas (genuine grades).—Special to 28/-; choice, 20/- to 24/-; standard, 13/- to 18/-; plain, 10/- to 12/-; inferior, 5/- to 8/- per case. Citrus Fruits.—Lemons, local, extra choice, 18/-; choice, 14/- to 16/-; medium, 12/-; small, 7/- to 9/-; irrigation, colored, 12/- to 14/-; Italian, 20/- to 23/-; Victorian, 12/- to 14/-; Oranges, Valencias, extra choice, 24/- to 26/-; special to 32/-; choice, 20/- to 22/-; medium, 12/- to 16/-; small, 8/- to 10/-; irrigation, 12/- to 16/-; common, second crop, 2/- to 7/- per bushel case. Figs.—Light, 3/6 to 4/6; dark, 5/- to 7/- per quarter-bushel case. Grapes.—Hamburg, 10/- to 15/-; Black Muscats, 10/- to 18/- per half-bushel case. Nectarines.—Irrigation, 4/- to 7/- per half-bushel case; Victorian, 8/- to 12/- per bushel case. Passion Fruit.—3/- to 7/- per half-bushel case. Peaches.—1/6 to 6/- per half-bushel case; Elbertas, 3/- to 7/- per bushel case; Victorian, 5/- to 8/- per bushel case. Pears.—W.B.C., 3/- to 9/- per bushel case. Pineapples.—Queens, green, 12/- to 16/-; colored to 17/-; Ripleys, 8/- to 12/- per case. Plums.—1/6 to 7/- per half-bushel case; Victorian, 5/- to 10/- per bushel case. Tomatoes.—2/- to 7/- per half-bushel case. Water Melons.—8/- to 20/- per dozen; Rock Melons, 7/- to 10/- per bushel case.

Classified Advertisements

Readers can make use of this column for their advertisements of "Wanted" or "For Sale."

Rates:—Casual, 2d. per word; or contract, 1½d. per word.

For Sale.

FRUIT TREES, TREVATT, Apricot, budded from selected trees. Fig Trees, White Adriatic. Grape Vines, own roots, strong plants, clean area, wine and table, 100,000 stock.
WEARE'S Nurseries, Griffith, N.S.W.

* * *

ACRES, 17½—11½ orchard, good crop, fine young Lemon patch, 2 a. bulbs, pipe drained. Good h., bld., new garage, 11 m. Melbourne, main road, M.B. of W. water, suit flowers.—C.H.E.B., "The Fruit World."

Pumping Plants, Engines, etc.——

We are recognised as Specialists in engineering jobs for orchard and farm
Consult us for your requirements

RUSSELL & CO. - - Engineers
BOX HILL

Geo. Lister Pty. Ltd.
Importers and Exporters.
19 Western Market, Melbourne.
Telegraphic Adress: "Listeria," Melbourne.
'Phone: Cent. 4417.

Geo. Lister Pty. Ltd., representing some of the leading houses in the British and Continental fruit trade, desires to inform growers of Apples, that they are prepared to receive on consignment or will purchase Apples for the United Kingdom, Denmark, Sweden, Holland, Germany and Norway.

Further information may be obtained by communicating with—
GEO. LISTER PTY. LTD.

SOUTH AUSTRALIA APPRECIATED.

Victorian Fruit Packing Expert Pleased with Progress in S.A.

Mr. Basil Krone, fruit packing instructor for the Victorian Department of Agriculture, speaks in terms of appreciation of the cordial welcome he received in South Australia when he visited that State by invitation of the S.A. Department of Agriculture and the South Australian Fruit Marketing Association to give fruit packing instruction.

Mr. Krone stated the organisation was perfect, and every facility was provided for smooth running. Packing demonstrations were given at the East End Markets at Blackwood and Angaston. There were large attendances and much enthusiasm was aroused.

Mr. Krone's services extended over a week. He states that there is 100 per cent. demand for the Canadian standard case, and that growers are inclined to use the pinewood case and colored labels.

The "cheek" system has been adopted, thus superseding the older flat packing methods. Mr. Krone states that the Agricultural Bureau, which is operating in South Australia, is being conducted efficiently.

For Quality Fruit and Vegetables

KILL·INSECTS!

AS A SPRAY, "Black Leaf 40", Nicotine Sulphate, kills aphis, thrips, leaf-hopper, red-bug, psylla, etc., both by contact and by its nicotine fumes. Combine it with Lime Sulphur, Lead Arsenate, Bordeaux, etc., if you wish, and make one spraying do double duty.

AS A NICOTINE DUST, for orchards, truck crops and gardens, mix "Black Leaf 40" with an alkaline carrier such as Hydrated Lime, as described in our free spraying and dusting chart.

"BLACK LEAF 40" is the world's leading nicotine insecticide. Endorsed by Experiment Stations. Deadly to all soft-bodied sucking insects. Non-injurious to foliage. Ask your Experiment Station.

Just "Paint" It On the Roosts

Kills lice on your entire flock, whether 50 birds or 5000. When chickens perch upon roosts that have been painted with "Black Leaf 40", fumes are slowly released that penetrate the feathers and kill the lice.

KILLS BY CONTACT and FUMES

While the effectiveness of "Black Leaf 40" is primarily dependent upon direct contact (wetting), a secondary advantage is furnished by the "gassing" effects of the penetrating nicotine fumes set free in the spraying material. This two-fold action is an advantage not possessed by any non-volatile spraying solution.

"BLACK LEAF 40" CONTROLS POULTRY LICE

The treatment requires only a small paint brush, a can of "Black Leaf 40" and a few minutes' time for "painting" the solution on top of the roosts. Easy, effective and cheap. Eliminates all individual handling of birds. Ask your Dealer for information or write us.

TOBACCO BY-PRODUCTS CHEMICAL CORPORATION, Incorporated
Louisville, Kentucky

"Black Leaf 40"
40% Nicotine

PROTECTS ORCHARD AND GARDEN
Black Leaf 40
KILLS POULTRY LICE

A 500-Acre Orchard and Nursery.

A Review of the Enterprise of the Two Bays Nurseries and Orchard Company.

SITUATED at Moorooduc, Victoria, 34½ miles from Melbourne, is the nursery of the Two Bays Nurseries and Orchard Company. This property occupies a commanding position about 200 ft. above sea level, on an easterly slope, midway between Western Port and Hobson's Bay.

The orchard contains 46,000 trees, mostly Apples and Pears. The total area is 540 acres, the age of the trees varying from one to 18 years. Some idea of the area of the orchard can be arrived at from the fact that the distance from one end of the orchard to the other is one mile. Twelve thousand pine trees, which have been planted around the property to act as a windbreak, are growing nicely. It is estimated that there are two million young trees in the nursery, consisting of deciduous fruits in great variety. The varieties grown in the orchards are as follows:—

Apples.—Jonathans, Delicious, Democrat, Granny Smith, Rome Beauty, Munros.

Pears.—Broome Park, Packhams, Williams, Winter Nelis, Madame Cole, Josephines.

The business was originally founded 39 years ago by Messrs. Geo. and Charles Griffeth, who rendered splendid service to the fruit industry throughout Australia, New Zealand and other parts.

The management of this large property, which has grown from a small beginning, is now in the hands of Mr. C. M. Griffeth, who is a son of the late Mr. George Griffeth, and is well known throughout the industry. He has been connected with the orchard and nursery business since his boyhood, and is well fitted to control a business of such large dimensions.

Speaking of Apples, Mr. Griffeth has a very high opinion of the Democrat variety. It is a wonderful keeper, and always brings good prices. Even in the glut year it returned up to 17/- per case. The Two Bays Nurseries were the original raisers of this variety.

Much money and labor has been expended in bringing this orchard into bearing, and it is gratifying to the proprietors to know that their past efforts are now bearing fruit. The largest crop harvested up to the present has been 15,000 cases, but it is estimated that within five years the average annual crop will be 70,000 cases.

Timm & Gerstenkorn
Fruit Auctioneers and Brokers
Fruchthof . HAMBURG . Germany

Established 1885

Tel.-Addr.: „Timmkorn Hamburg"

Special Catalogues showing prices issued after each sale

Account sales and cheques sent promptly after sale if desired cable remittance

Phone : F 4869

Vic. Rep. Consignments solicited * Advances if desired
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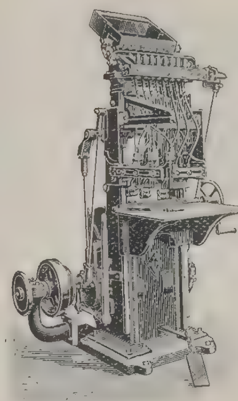

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To control **codlin moth** this year, Mr. Griffeth is following the Volck programme, as follows:—

Calyx Spray.—Arsenate of lead only. **First Cover Spray.**—Arsenate of lead, 1 gallon Volck. **Second Cover Spray.**—Arsenate of lead, 1 gallon Volck. **Third Cover Spray.**—Arsenate of lead, and Volck. **Fourth and fifth sprays**, 1½ gallons Volck. One hundred gallons of water have been used in each case. The first cover spray was applied as soon as the moth made its appearance.

Three motor sprayers are kept going continuously, and consideration is now being given by the proprietors to the installation of stationary spray plants throughout the orchard.

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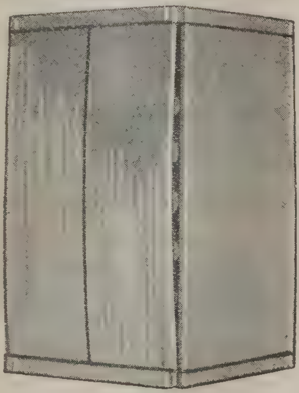

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The refrigerator is driven by a 20 h.p. electric motor, the power being supplied from the Yallourn power house. This was the first electrically driven cool store in the State, and it has been found to be most economical. The annual bill for power and light is £170. This includes electricity used for running graders and other machines, and lighting in cool chambers and packing sheds. The packing shed, which adjoins the cool store, has all the necessary labor-saving devices, including "Lightning" graders and conveyors.

It is interesting to note that before placing in the cool chambers all fruit is graded and packed, and re-packed again when taken out of the chamber for market. This insures accurate sizing and also enables more fruit to be placed in the cool chambers.

The Two Bays Apples and Pears, which have earned a good name for quality and grade, are eagerly sought after, and every effort is being made by the proprietors to not only maintain the standard, but improve.

In the coming season, 12,000 Canadian softwood cases will be used. Mr. Griffeth considers this the world's standard case, and its use essential.

The Two Bays Company is to be congratulated on its enterprise, and we wish it all success in its future efforts.

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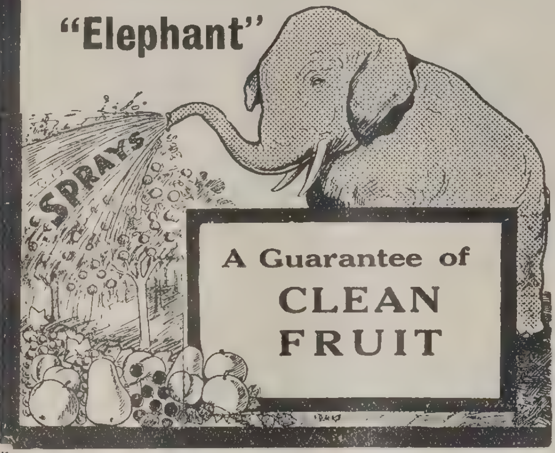

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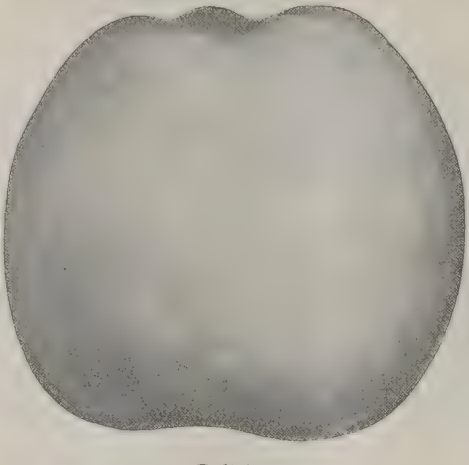

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THE "Fruit World Annual" for 1930 is a comprehensive and valuable publication. A copy of the "Annual" has been sent to "Fruit World" subscribers.

A complete chart is given showing in natural colors the major insect pests and fungoid diseases which affect fruit and fruit trees, together with recommendations for their control.

The packing section is well illustrated and contains tables of counts any many valuable hints.

Export is featured, and good information is included regarding British and Continental markets and suggestions for improving the trade.

Citrus, canned fruit and dried fruit are all carefully dealt with, also cold storage, manuring, the planting of fruit trees, marketing fruit in Australia, and other matters of interest.

There is also included a list of a large number of fruitgrowers' associations throughout the Commonwealth. Altogether the "Fruit World Annual" is a first-rate production. Copies are obtainable at 2/- post free from the Fruit World Pty. Ltd., Box 1944, G.P.O., Melbourne.

The Re-Working of Fruit Trees.

(By P. H. Thomas, Senior Horticulturist, Tasmania.)

GRAFTING.

ONE OF THE GREATEST obstacles experienced in standardising fruit at the packing shed is the number of varieties that some areas of orchard are producing, many being inferior from a marketing viewpoint.

Again, certain orchardists in various districts are finding that their choice of varieties has not proved suitable to the locality, in some instances being of very little commercial value. In cases such as have been outlined, the grower is faced with the adoption of either of two methods in order to rectify the disability. **A decision must be reached whether to re-plant or re-work the particular area to a more desirable kind.**

The first question that should be taken into consideration is the choice of the varieties the trees are to be worked over to. It is now commonly accepted that the principle of selection should be embodied in all plant propagation, and this factor should certainly be taken into consideration in making the choice of trees from which scions are to be obtained for the operation.

During the winter months the number of **scions required should be chosen and taken from trees that are known to be vigorous and productive.** These should be carefully "heeled in" in a dry and well-drained situation, so that they may retain their "dormant" condition, and be kept fresh and plump until the period for grafting arrives.

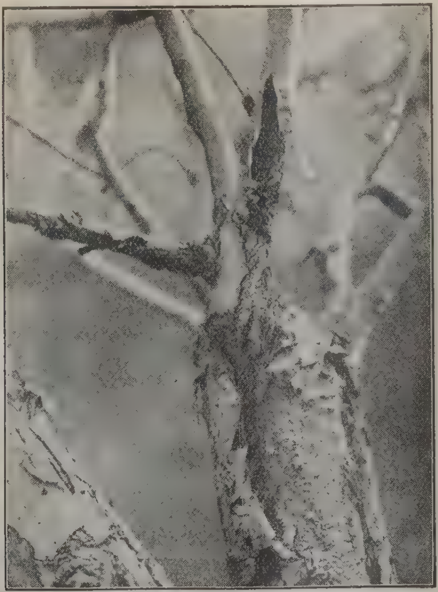


Fig. 1.—Grafted tree attacked by Polystictus versicolor fungus.

"When is the best time for grafting?" This is a question that is often asked, and is somewhat difficult to answer definitely. An approximate date may be given for the different kinds of fruits, but the orchardist may more easily and surely determine it for himself.

When the first sap movement is observed in the tree—that is when the buds commence to swell—is a time when the work may be commenced. It may be continued as long as the scions employed retain a semi-dormant condition. The main principles that should be observed in order to obtain successful results are:—

(1) Clean cutting with a sharp knife of both the scion and the tree that is to be re-worked, according to the method that is to be adopted.

(2) The scion should be firmly affixed to the part with which it is to make union by tying tightly with raffia, tape, or other suitable material.

(3) Air and water should be excluded from the cut surfaces by covering entirely with a good grafting-wax.

The preparation of the tree is a very important matter, but, unfortunately, has been little considered by a large number of orchardists. In younger trees (those up to about six or seven years old) very little trouble is experienced in obtaining a good percentage of grafts to take. Of late years, however, a great deal of damage has resulted, and older trees have been severely injured and sometimes killed by a species of "die-back." This may appear in the first year of grafting, or even after the scions have taken and made fair growth. The origin of this trouble is due to infection by a fungus disease known as **Polystictus versicolor**, which attacks the cambium layer at the exposed cut and spreads downwards, killing the tissues.

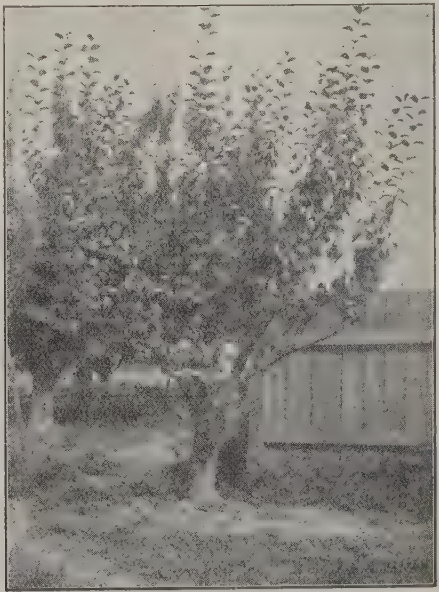


Fig. 2.—Apple tree reworked high up in main limbs. (Note crop of fruit borne four years after grafting.)

It is noticeable that the disease is not nearly so prevalent where trees are not cut too hard back for re-working; or where a number of limbs have been left unshortened in the grafting operation, and maintained until the scions have become established.

In view of this, the best advice that can be tendered to the operator is not to cut the trees that are to be grafted too hard back, but to come higher up into the tree, grafting upon younger wood, and leaving one or two limbs to make foliage and carry on the functions of the tree until the grafts have become established.

Some growers advocate that the de-heading process should be carried out in the autumn, as it gives the tree an opportunity to callus over its cut surfaces before grafting. I have examined a number of trees that have been treated in this way, but have been unable to find any evidence of callusing or any material advantage accruing from the practice. Very little healing will take place after the autumn, and it often happens that the bark and cambium become destroyed through the action of water for about half an inch below the edge of the wound, making it necessary to repeat the operation and cut back into the green, live wood before inserting the graft.

When de-heading, care should also be taken to choose limbs that are in a good position to take the graft, and thus ensure a symmetrical and well-balanced tree.

There are a number of different methods of re-working fruit trees by means of grafting, and the most popular are known as the "rind," "strap," and the "tongue" grafts.

Rind Graft.—This is especially suited for older trees. The main branches of the tree that has been de-headed are carefully smoothed with a knife, and a longitudinal cut of about one inch is made in the bark at the most convenient spot to receive the graft. The scion is prepared by simply making a long sloping cut of about the same length at the base of a piece of young wood about four inches long, and **trimming the edge down one side of the cut so as to put a very fine angular corner on the cut surface.** This gives the scion a wedge-shaped end. The bark of the tree is now raised on one side of the longitudinal cut, and the scion inserted underneath, **in such a position that the prepared edge comes into contact with the shoulder of the bark on the other side,** pressing down steadily until the scion is firmly held in position. The graft is then tightly bound with a wax cloth or tied with raffia, and sealed with grafting wax, care being taken that no air or water may enter into the cut surfaces.

In cutting the scion it is advisable to retain a bud at each terminal. The lower one of these at the bottom of the scion will help to hold the sap and promote the union of the graft. Three buds are sufficient to leave in order to produce growths for the future framework of the tree, and these should be so situated that the resultant shoots will occupy positions which will produce an evenly balanced framework.

Strap Graft.—The "strap graft" is prepared in a very similar manner to the "rind," except that before making the sloping cut, a thin piece of bark is cut upwards on one side of the scion. This is laid back, and the graft completed in the same way as with the "rind" graft. When inserted, the strap is brought over the top of the flat surface of the limb and tucked under a piece of bark that is raised on the other side. **This is one of the neatest methods of re-working old trees, and although it involves more time in carrying out, the benefits obtained from the quicker healing of the exposed surfaces and the brace that is afforded to the scion fully compensate for the extra labor.**

Tongue Graft.—With younger trees this method may be employed to advantage. The small "stubs" or branches that the tree has been cut back to should be treated in the same method as explained in the preparation of the scion used in the "rind" method, with the addition that halfway along the slanting surfaces a tongue is formed by

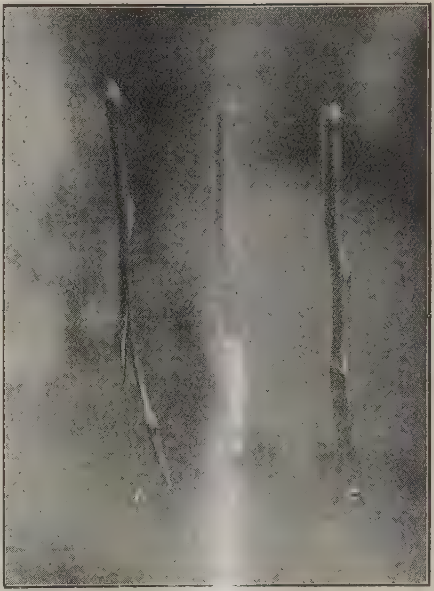


Fig. 3.—Scions prepared for grafting:—
(a) Strap graft.
(b) Rind graft. (Note edge of cut trimmed on one side.)
(c) Tongue graft.

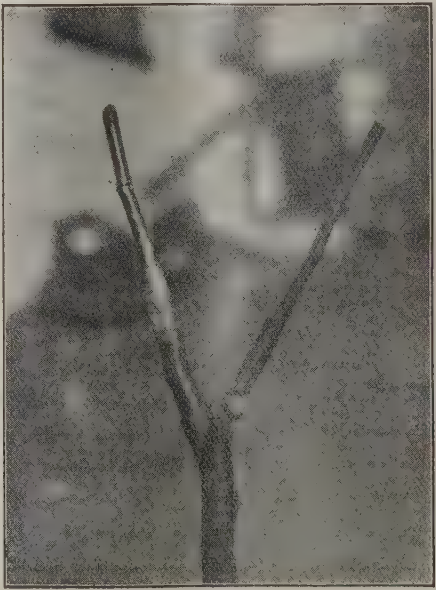


Fig. 4.—Tongue graft—affixed in position and bound with waxed tape.

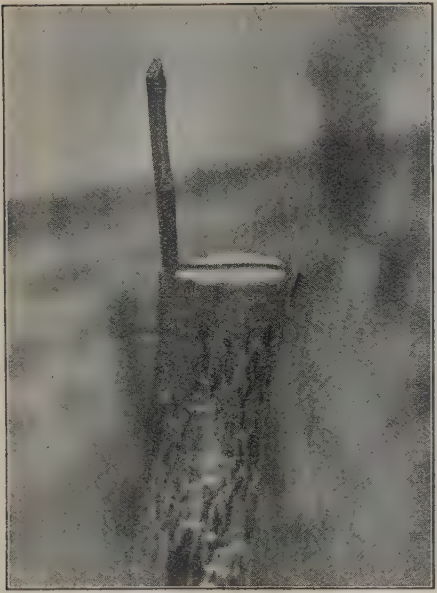


Fig. 5.—Strap graft, showing method of insertion.

cutting about a quarter of an inch into the wood. The scion of the variety to be grafted is treated in a similar way, and the scion and stock should be united so that the tongues of wood overlap and fit into each other, making a strong spliced union. **Care should be taken that the cambium layers of both parts come into contact, otherwise union will not take place.**

The cambium layer is situated between the bark and heartwood. In Apples, Pears, and Plums no difficulty is experienced in bringing this about, as the barks of the scions and young trees to be re-worked are of much the same thickness. There are a number of other ways of grafting; amongst these are the "wedge" and "saddle" methods. In the former, it is necessary to split the limb that is to be treated. A scion cut to the fashion of a wedge is introduced, so that the cambium layers of both come into contact. The principal objection to this method is that a crevice is made in the limb, which takes longer to heal over, besides forming an ideal place for the lodgment of spores of the different fungi, and a harbor for insect pests.

Apples, Pears, Plums, and Cherries may all be successfully treated in the manner described. Peaches and Apricots, however, do not respond to grafting. With these fruits the best method is to cut down old trees and "bud" into the new wood made during the summer months.

If good results are to be obtained, the operator should endeavor to get thoroughly into the way of handling a knife before attempting to carry out the work in the orchard, and learn how to make the necessary cuts required. Select a number of pieces of wood (pruning sticks) and practice upon these as if they were the scions to be utilised.

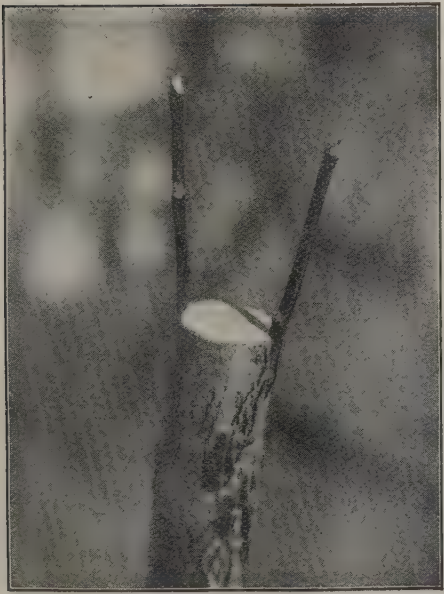


Fig. 6.—Rind graft, showing method of insertion. (Note.—The trimmed edge of the scion is brought into contact with the shoulder of bark opposite to the raised portion.)

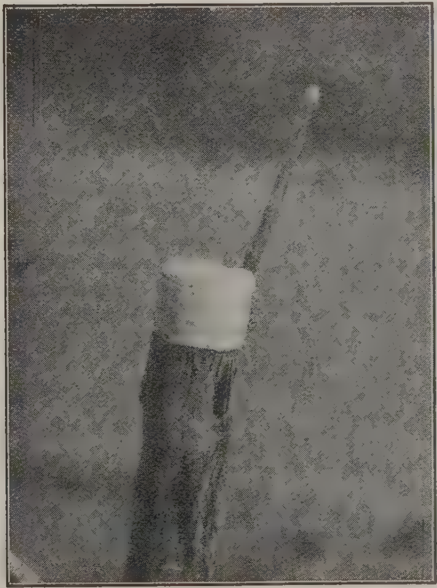


Fig. 7.—Use of waxed tapes. Graft affixed and bound in position.

Grafting Wax.—A good grafting wax may be prepared by melting the following ingredients together over a slow fire:—3 lbs. resin, 2 lbs. beeswax, 1 lb. mutton tallow.

The consistency of the preparation may be altered by increasing the tallow to make it softer, or the beeswax if a harder wax is desired.

Waxed calico is prepared by dipping 6-inch strips of a cheap calico into a hot wax composed of the following ingredients:—3 lbs. resin, 2½ lbs. beeswax, 2 lbs. tallow.

After thorough soaking the strips are immediately drawn between two rounded lengths of wood fastened together at one end. This process removes the surplus wax, leaving the calico impregnated with sufficient wax to make an adhesive tape which will serve the dual purpose of waxing and binding the scions into position.

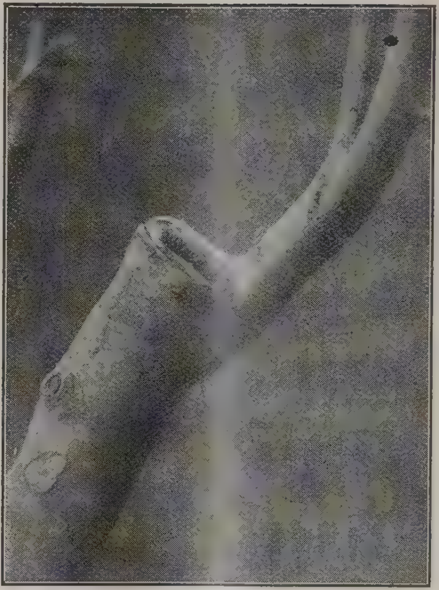


Fig. 8.—Strap graft, showing development two years after operation.

Plant Bulbs This Month.

FOR the making of gay displays during the early spring months, bulbs should be freely planted now. By doing so they will be enabled to make good roots before winter sets in. Well-arranged beds of these handsome flowers are most attractive, and a succession of bloom may be had for many weeks.

The following kinds are all of easy culture and free-flowering. **Anemone, Ranunculus, Freesias, Ixias, Jonquils, Daffodils, Spanish Iris, Muscari** (Grape Hyacinths),**Snowflakes, Scillas, Sparaxis, Tulips** and **Tritonias.** For the back of borders, grouped here and there, **Watsonias** are most effective, and a few are well worth growing on each border.

FIGHTING INSECT PESTS IN THE ORCHARD.

Pear Root Aphis.

These insects are becoming very numerous in Pear orchards in many parts of Victoria. It is a small dark aphid covered with a white cottony material and greatly resembling the woolly aphis, but attacks only Pear roots.

Control.—Eliminate young stunted trees and replant healthy ones. The Japanese Pear stock (Pyrus Calleryana) is much more resistant to this pest than the French seedling stocks. Remove soil to a depth of six inches around the tree and spread Paradichlorbenzine (P.D.B.) about roots. Cover over immediately with soil. Stamp firmly down.

Red, Olive, Apple Mussel, San Jose and Other Scales.

The hot weather is responsible for the hatching out of young scales. It is advisable to spray it once with any of the white oils, 1 in 40.

Orange Butterfly.

The caterpillars of this butterfly measure 2 inches in length, with the head dark brown and the upper surface of the body green, marked on the sides with a brown and white stripe. Spray with arsenate of lead, 1 in 25.

Codlin Moth.

Examine bands and destroy caterpillars, replace bands and examine fortnightly for caterpillars. Spray with Volck or any of the white oils. See "The Fruit World," February 1, 1930, p. 77.

Looper Caterpillars.

See "The Fruit World," February 1, 1930, p. 77.

Plum and Cherry Borer.

See "The Fruit World," February 1, 1930, p. 77.

Painted Apple Moth.

The caterpillars of this moth are from an inch to 1¼ inches in length when full grown, and densely covered with hairs. The male moth measures about an inch across the expanded wings. The front wings are mottled, with grey and light and dark brown. The hind wings have a large basal patch of orange yellow. The female is wingless. The caterpillars are very destructive to fruit trees. Spray with arsenate of lead, 1 in 25.

Pinara or Snout Moth of Apple.

The caterpillars are dark grey, resembling the bark of the Apple trees. The moth is a yellowish drab color. During the last few weeks these destructive caterpillars have been doing a fair amount of damage to young Apple trees. They strip all the leaves off and also eat the bark. Spray same as for Painted Apple Moth.

Emperor Gum Moth.

The young caterpillars of this moth are black in color. When fully grown they are greenish and covered with orange and blue spine-like projections on all the segments of the body. This is a native insect, but has unfortunately become an orchard pest. It attacks flowers, leaves and fruit spurs of the Apple.

Spray same as for Painted Apple Moth.

Rutherglen Bug.

Owing to the hot weather, these insects have become very numerous in orchards. They are destructive to Grapes, Peaches and other fruits. Use phenyle spray, black-leaf 40 or nicotine sulphate.

Australian Citrus Growers' Convention.

Successful Gathering at Mildura.

Marketing Oranges in Australia, New Zealand and Abroad.

Compulsory Co-operation Agreed to. **Next Conference to be Held in New South Wales.**

MILDURA IN MIDSUMMER. A pleasant oasis of greenery won from the surrounding Mallee scrub. A triumph of man's conquest over Nature, or rather, the realisation of man's conquering faith by co-operating with Nature, and an earnest of future greatness.

Mildura is a pretty town nestling on the banks of the Murray River—a broad majestic stream which has flowed along its course for countless centuries.

Mildura and the surrounding districts are as famous for citrus production as for dried fruits. The setting is ideal for the first Australian Convention of Citrus Growers. Groups of earnest men have gathered from far and near—to hear scientific addresses, to discuss and smooth away the difficulties confronting the industry—or again to witness practical demonstrations of cultural practice.

* * *

Australia is steadily developing her nationhood. All honor to the primary producers who face Nature's vagaries and who, in winning success from their endeavors, are building up a strong self-reliant people in this island continent of the South Pacific.

The Convention lasted four days—from February 4 to 7. So great was its success that it has been decided to meet in this way annually. The next function will be held at Sydney.

The first three days were taken up with scientific addresses and tours of inspection, leaving the fourth day for discussing the items on the agenda paper.

Delegates attended from South Australia, New South Wales, Victoria, and Queensland. The presence of many leading Government officials and scientists added distinction to the proceedings. Much enthusiasm was aroused, and the Association has taken a step forward.

* * *

THE AUSTRALIAN CITRUS GROWERS' Convention was officially opened by the Mayor, Cr. W. J. Bowring, who also welcomed the delegates to Mildura. The morning session was devoted to the chairman's address, a paper by Prof. Prescott on "Soil Research," and a brief review of the work of the Development and Migration Commission.

During the afternoon, delegates visited Mr. Wilkinson's grove, at Red Cliffs, where a field talk on citrus was given by Mr. S. A. Cock, Government Citriculturist. An inspection was made of the Red Cliffs Pumping Station as well as citrus groves in the Irymple district.

On the second day there were visits to Merbein and Curlwaa, when demonstrations were given in soil cultivation and fruit packing. In the evening a happy smoke social was enjoyed.

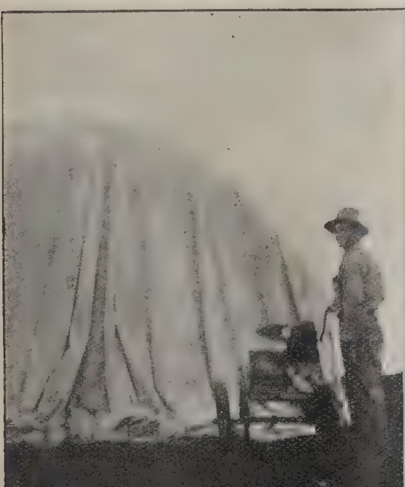
Thursday, February 6 was taken up with helpful addresses on subjects of practical interest to citrus growers. In the evening there was a fumigation demonstration, also moving pictures showing phases of the citrus industry.

Friday, February 7, was devoted entirely to Conference business.

The Visiting Scientists.

Appreciated lectures were given as follows:—

"Soil Research in Relation to the Citrus Industry" (Prof. J. A. Prescott,



Fumigating Citrus Trees, at Mr. C. C. Whiteley's, Irymple.

Three Murrabit Delegates—Messrs. Riley, D. Walters and W. Egan.

A Well-grown Orange Tree at Mr. H. C. Symons' grove, Merbein. Mr. C. H. Cameron, Sec. of the Red Cliffs branch of the V.C.C.A., is seen in the picture.

of the Waite Agricultural Research Institute, South Australia).

"Bud Selection" (S. A. Cock, Victorian Government Citriculturist).

"The Work of the Citrus Preservation Committee," by Dr. W. J. Young, Professor of Bio. Chemistry, University of Melbourne.

"Investigations in Progress at the Commonwealth Research Station, Griffith, N.S.W.", by Eric S. West, M.Sc.

"Manuring Citrus Trees at the Berri Experimental Orchard," by Geo. Quinn, Chief Horticultural Instructor, South Australia.

Mr. Harold W. Clapp, Chairman of Commissioners, Victorian Railways, gave an appreciated address on "Salesmanship and Citrus Marketing."

CONFERENCE DISCUSSIONS.

Export to New Zealand.

There was general agreement as to the necessity for controlled shipments to New Zealand, the present arrangements being deemed spasmodic. Mr. Parkes considered that the Victorian Central Citrus Association as an organisation should not export fruit, but that this should be done through organised growers and packing sheds. The North Island was being effectively supplied from New South Wales, the South Island could be supplied by Victoria and South Australia.

Messrs. J. Allen and A. Mills (Waikerie), F. H. Metters (Murray View), W. Cowlishaw (N.S.W.), and Capt. Halhed (Vic.), all favored organised export to New Zealand.

Mr. Schwennesen considered the present methods of exporting to New Zealand were wrong. Under co-ordinated effort there should be no need for South Australia to export to New Zealand. The type of fruit—standardised—desired by the Dominion could come from the other States, leaving the Melbourne market free for South Australian fruit.

Mr. Cowlishaw said that Griffith (N.S.W.) citrus had a wonderfully good name in New Zealand, because of the regular shipments of standardised fruit. The New Zealand market must be developed from a Federal standpoint.

Mr. P. S. MacDermott advised using only the Californian case. A representative of the Association was needed in New Zealand.

It was decided on the motion of Mr. K. Dunstan, seconded by Mr. H. Williams (Shepparton, Vic): "That it be a recommendation to the Federal Citrus Council to take steps to control export to New Zealand through the various State executives."

Compulsory Co-operation.

Mr. F. H. Metters said that while the Murray Citrus Growers' Association controlled 90 per cent. of the fruit in the South Australian Murray districts, other growers, particularly those in the Torrens Valley, were not similarly organised, and marketing arrangements were upset. Certain growers were riding on the back of the Association. The benefits of control had been proved. In Queensland compulsory organisation had been a wonderful success. Prior to the control, Pineapple growing was in a precarious position, now it was satisfactory. He moved: "That this Conference, representing the Citrus Growers' Organisations in New South Wales, Victoria, South Australia and Queensland, is strongly of the opinion that legislation governing the establishment of fruit boards for the control of marketing fruits, should be introduced in each State, where such legislation does not exist. In order to ensure the stabilisation of the citrus industry.

A group of some of the official visitors:—Left to right—Messrs. G. Quinn (who is lighting his pipe), Chief Horticultural Instructor, S. Aust.; R. J. Benton (Citriculturist, N.S.W.); A. W. Schwennesen (Convention Chairman); C. G. Savage (Director of Fruit Culture, N.S.W.); Dr. W. J. Young (Professor of Bio-chemistry); J. M. Ward (Supt. of Horticulture, Vic.); Prof. J. A. Prescott (Waite Institute, S.A.). Front row—Messrs. W. Ranger (Manager Committee of Direction, Brisbane); H. W. Clapp (Chairman of Commissioners, Vic. Railways); E. J. Mulvaney (Development and Migration Commission).

Mr. Schwennesen said that until recently he was not convinced as to the necessity for control by legislation, now it had his fullest support. The Bill now before the Victorian Parliament, if passed, would enable citrus growers to control their industry if a sufficient number voted in favor on a poll being taken.

Mr. Cobbett supported the resolution; the egg industry in N.S.W. was controlled by the producers under legislation enactment, though Victoria, lacking this legislation, was sending vast quantities of eggs into New South Wales, and breaking down the market there. Legislation was necessary in any industry that was faced with export.

Mr. W. M. Newton said he favored control if such could be in the hands of the growers. He did not favor Government control.

Various questions were asked by delegates. The motion was carried unanimously.

Future Conventions.

This question was debated, some favoring annual conventions, others desired meetings every two years. It was finally decided to hold the conventions annually, the 1931 conventions to be held in New South Wales.

Illness of Mr. H. G. Such.

A resolution of sympathy with Mr. H. G. Such in his illness, was carried, and Conference expressed a sincere wish for his speedy recovery to health.

V.C.C.A. Re-organisation Proposals.

Mr. D. Walters, Murrabit, said he appreciated the spirit of harmony at the Convention. The proposal for re-organisation sponsored by the Murrabit branch was a constructive programme for improving the V.C.C.A. Under the present system, growers were not sufficiently in touch with the Board of Directors. He submitted that there should be a convenient system of grouping the various districts, and that each group should have a representative on the Central Council. The word "Director" was misleading in a co-operative organisation. The V.C.C.A. could only be strong as the individual branches were strong. The present system of electing directors did not provide for sufficient district representation, and many growers were out of touch.

In South Australia there were twelve members of the Central Executive, each member representing a particular district. He moved in favor of the present constitution of the V.C.C.A. being altered to provide for a system of electing directors from defined group areas.

At Capt. Halhed's Citrus Grove, Merbein. Demonstration with Harvey implements.

Mr. A. Ingram, Tresco, seconded. Growers would be better in touch with the organisation if each district had an elected representative.

Helpful contributions to the discussion were made by Messrs. H. R. Paton, W. M. Newton, Halhed, Hughes, Egan, McMullen, Taylor (Curlwaa), and others.

Mr. Metters explained the South Australian system of grouping, each group having its own director. An amendment was submitted, in view of the recent appointment of Mr. Parkes as General Manager, requesting Mr. Parkes to submit a report on the reorganisation question.

Replying, Mr. Walters said that the Murrabit branch was not proposing a selling organisation on the "Sunkist" lines. He would withdraw his motion in favor of the amendment, and the latter was carried unanimously.

The Case Question.

Mr. Newton, Mildura, moved that no alteration be made in the standard dump case at present in use for citrus.

Mr. Ingram said that the Department of Agriculture favored the Canadian standard case. New South Wales had a different case. According to the regulations, the flat bushel case could not be used for citrus. It was decided to have further enquiries made on this subject.

Citrus for Ships Voyages.

Mr. McMullen (Bamawm), urged that shipowners whose boats travel from Australia, should buy only Australian Oranges. It was reported that the steamship companies were now buying Australian Oranges.

The Smithco Friction Lift demonstration.

Duty on Manures.

Mr. McMullen spoke of the value of nitrogenous fertilisers and the heavy duty on the imported article. Mr. Egan (Murrabit) supported. Such a duty kept up the cost of production, which all were anxious to reduce.

A resolution was carried, requesting the Board to approach the Government for a reduction.

Country Order Trade.

The question was raised as to the extent to which fruit commission agents were developing the country order trade. Several delegates representing packing sheds gave their experiences in pushing this trade. Conference accepted a suggestion from Mr. Walters that data be prepared showing the districts served by the citrus packing houses, and the quantity of fruit supplied.

Importation of Citrus Juice.

The Bamawm branch recommended a prohibitive duty on citrus fruit juices and peel. Mr. Parkes stated he would take the matter up with the Customs Department.

Country Sales.

The chairman reported having visited provincial cities. Ballarat agents bought the bulk of their supplies from Melbourne; that city, together with Bendigo and Geelong, consumed about 140,000 cases per year.

Factory Supplies.

Mr. Schwennesen reported that the V.C.C.A. was arranging a system of contracts between the growers and the manufacturers, direct.

Trade with the East.

Mr. P. S. MacDermott moved:—"That in view of the possibilities of substantial trade in the East being built up with fruit and other produce, it is considered that the time is now opportune for the appointment of a Trade Commissioner in the East.

He believed there was a splendid opening for shipping Oranges to the

East. Mr. H. Louey Pang was going to China again soon, and would report to the Association; probably thirty to forty thousand cases per annum could be sent to China if refrigerated shipping space were available.

Captain Halhed congratulated N.S.W. on their excellent work in pioneering new markets.

Mr. MacDermott's resolution was carried, and at the suggestion of Mr. Parkes it was decided to send the recommendation forward to the Australian Conference of Fruitgrowers at Hobart.

Maturity Standards.

Mr. Parkes reported that tests were being continued. Mr. J. W. Clark and Mr. J. A. Egan pointed out the seriousness of immature fruit going on to the market. In reply to a question, the Chairman said the Department would not fix a standard without further experiments.

Pure Fruit Drinks.

Regulations governing the sale of drinks purporting to be made from fruit had been drafted, stated Mr. Parkes. Obstacles were placed by vested interests against the regulations being brought into force. It was proposed, in regard to imitation fruit flavors, cordials, etc., that the label must bear the word "imitation."

V.C.C.A. and Importations.

Mr. Parkes stated that the question of importation during the "blind" period, had been considered by the directors of the V.C.C.A. N.S.W. strongly requested prohibition of importation. The V.C.C.A. recognised that it was necessary to have a supply of citrus the whole year round, and the Association therefore would not be opposed to importations during the slack period until growers were fully able to meet the market requirements.

The Melbourne Markets.

Mr. G. E. Kitchin-Kerr, representative of the Federal Citrus Council on the Melbourne Market, gave an interesting review of marketing operations. He considered the V.C.C.A. was performing good service. Under the present system all the surplus of good citrus in South Australia and Victoria could be absorbed for several years, but the big problem was the large surplus from N.S.W. Melbourne normally required about 700,000 cases. South Australia sent about 160,000 cases, and Victorian growers supplied 350,000. The present agents were sufficient for the business. To have a larger number of agents would mean a clamor for increased commission, without any additional returns to the growers. Out of the 478,000 cases arriving on the net wholesale market, the Association handled 366,000. Gross arrivals from South Australia were 181,000 cases, of which the Association agents handled 160,000. The V.C.C.A. had done good work in arranging supplies for the big provincial centres.

Manuring Citrus Trees.

Mr. G. Quinn, Chief Horticultural Instructor for South Australia, gave an interesting review of manurial experiments conducted at the Berri Experimental Orchard. Tests were made with superphosphate, bonedust, potash and sulphate of ammonia. Experiments revealed that the nitrogenous manure was the determining factor. The important question was when to apply the manure. The greatest absorption of nitrogen was at the first growth.

In the Berri tests the first dressing of nitrogenous fertiliser was applied before the flowering, and the second later in the year. If the experiments in other countries on other trees were borne out it would seem that the main supply should be before flowering.

Stocks and Bud Selection.

Mr. Quinn emphasised that by working on the buds and stocks it was possible to materially improve the trees. In proposing a vote of thanks, Mr. Cobbett urged growers to try out experiments on their own blocks. Scientists were doing a service of great value to the industry.

Smoke Social.

Mr. A. W. Schwennesen, Chairman of the Federal Citrus Council, presided over a happy gathering of 150 persons at the Mildura Shire Hall at the Association's smoke night. The gathering comprised growers, scientists, packers, agents and representatives of the dried fruits industry. The proceedings were animated, and the utmost harmony prevailed.

The Chairman, in his opening address emphasised the need for control in marketing. Cr. Bowring in responding, complimented Mr. Clapp and the work of the Railways Department.

A lengthy toast list was honored. Short, bright addresses were given by Messrs. H. W. Clapp, E. J. Mulvaney, Dr. Young, J. M. Ward, S. P. Bromfield (Water Commission), F. H. Metters, P. S. McDermott (N.S.W.), C. H. Katekar (Renmark), J. MacNamara (Producers' Distributing Society), R. E. Downie and Capt. Halhed.

Mr. A. L. Johnston and P. Malloch spoke of the effective work of the A.D.F.A. and the solid foundation laid by the late W. B. Chaffey.

Visit to Red Cliffs.

Motoring to Red Cliffs, the citrus grove of Mr. L. Wilkinson was inspected. Mr. S. A. Cock gave a demonstration of pruning, showing the necessity for shaping the trees in their early stages; the three-fork head was desirable. In cutting the centres of older trees to admit light and air, the thinning should be done gradually.

Delegates visited the pumping station; also the Red Cliffs Co-operative Packing Shed—the biggest of its kind in the Commonwealth — in which 7,200 tons of fruit were processed last season.

Other citrus groves were visited, and the outing was greatly enjoyed.

Red Cliffs has an irrigable area of 10,000 acres, of which 7,000 acres are planted with Sultanas; 1,000 with Gordos, and 800 with Currants; 250 with Waltham Cross. There are over 800 acres under citrus. Of the 650 settlers, more than 400 have citrus trees on their blocks.

Last season the district produced 16,000 tons of dried fruits, of which 12,000 were Sultanas of high quality. Over 20,000 cases of citrus fruits were despatched.

Demonstrations at Merbein.

The morning spent on Capt. Halhed's citrus grove was greatly enjoyed. Here some interesting demonstrations were given of various implements for better soil cultivation, also spraying.

Rotary Hoe Cultivator Plough.—The Rotary Hoe Cultivator Plough exhibited by the Austral-Auto Cultivator Ltd. did good work. It was tractor drawn. The cultivator extends 2 ft. beyond the tractor wheel making it easy to work the land right up to the tree trunk. A nice tilth was left on the ploughed ground, while lucerne was torn up very well.

In addition to ordinary agricultural work, the Rotary Hoe Cultivator can till the land on steep hillsides. It will cut out couch, paspalum, weeds, etc., and will also cut up and work into the ground maize and sugar-cane stalks. It is suitable for effectively dealing with tussocky land, also prickly pear, blackberry and bracken fern. The cultivator has an automatic power lift for travelling short distances without ploughing. The depth control and gear lever are easily operated from the driver's seat.

The Smithco Friction Lift.—The Smithco Friction Lift attracted much attention. This is a labor-saving device, the power of the tractor being used to lift or lower the implement or to straighten discs at the headlands. The Smithco Friction Implement Lift can be attached to tractors or horse-drawn implements. The driver has instant control by means of a foot pedal.

The Simar Rototiller.—The Simar Rototiller is power driven, the operator walking behind or at the side, guiding with reversible handles. The width of cultivation is normally 3 ft. It can be increased to 4 ft., or reduced to 14 inches. The depth of tillage is from 1 to 10 inches, and this may be changed in a few seconds. The ease with which the machine can be handled was appreciated, also the fine cultivation work which was accomplished. Cultivation is effected by revolving steel tynes on strong springs.

Harvey Implements.—Mr. D. Harvey, orchard implement maker, of Box Hill, gave an interesting demonstration of several implements, tractor drawn. The model O1 rigid tyne power lift cultivator, has an 8 ft. 6 in. cut, the machine itself having its own power lift. It is adjustable to varying sizes, being suitable for vineyard rows. This cultivator will take either rigid or spring tynes. Means are provided that the cultivator may cut shallower on one side than the other, if desired.

The next implement demonstrated was a B7 four-furrow power-lift tractor plough, which can be reduced to three furrows. This implement was shown off-set with the four furrows set right out to one side of the tractor to plough right up to the trees, the tractor itself being clear of the branches. The depth is adjustable and the implement may be lifted clear of the ground to negotiate wet patches.

Citrus growers showed particular interest in the sub-soil plough which was fitted with a power lift, the work being performed satisfactorily. The sub-soiler was worked to a depth of 1 ft. to 2 ft. The land work was dry and hard, and the subsoiler was seen to advantage.

Hudson Implements. — Mr. George Hudson, of Merbein, demonstrated his patent lift and depth regulator, which is useable with plough, disc, cultivator or scarifier. With this appliance the implement can be lifted right out of the ground or worked to any desired depth. Growers expressed appreciation for this implement in the working of vineyards and orchards.

Ronaldson-Tippett Spray Pump.—A demonstration of spraying was given with the Ronaldson-Tippett Spray Pump, the machine being made at Ballarat, Vic. The pump showed power and regularity, also ease of transport.

Captain Halhed's Hospitality.

Much appreciation was expressed for the courtesy of Capt. Halhed, in supplying cool drinks.

Demonstrating the Simar Rototiller. Operator showing how the guiding handles can be adjusted higher or lower or from side to side whilst machine is in motion.

Phoenix Rain Machine. — The Phoenix Rain Machine was demonstrated in the public gardens opposite the Town Hall. Mr. J. W. Robinson, Ormond Plant Farm, gave a demonstration. The excellent pipe head control of the sprays was noted, also the ease of manipulation to any angle. Light flexible piping was set on standards to a height of about 3 ft. These pipes can be extended to a length of about 300 ft. The Town Council purchased one of these machines, and growers expressed considerable interest. The moisture fall was reckoned at about 1 inch per four hours.

Visit to Curlwaa.

Crossing the Murray into New South Wales, delegates visited the progressive irrigation settlement of Curlwaa. On the way, Mr. H. C. Symons' citrus grove at Merbein was inspected. The trees had grown splendidly, and the type of Orange is so good that buds are being taken for propagation purposes. There are six acres of citrus here, and the trees averaged six cases each last season.

One of the most famous blocks in the Curlwaa district is that owned by Mr. Page. Mr. Page has made a great success of Grapefruit, of the Marsh's seedless variety. The Grapefruit on this grove is favorably known throughout Australia. The visitors greatly appreciated the iced Grapefruit drink.

At the Curlwaa Packing Shed delegates met Mr. L. R. Strother and the directors. The shed is 70 ft. by 80 ft. Last season, 25,000 cases were put through, including 1,000 cases of Grapefruit and 50 tons of Lemons for factory purposes, the latter averaging about £12/10/- per ton. A "Lightning" grader is installed. Curlwaa fruit is handled under the well-known Delta brand. Mr. Basil Krone, the Victorian Fruit Packing Expert, gave an interesting demonstration on fruit packing.

A very hearty vote of thanks was carried to the Chairman, Mr. A. W. Schwennesen, for the capable manner in which he handled the Conference and its various functions.

The Railway Department and the Citrus Industry

Address by Mr. H. W. Clapp. Visit of the Bud Selection Expert Recommended.

Mr. H. W. Clapp, Chairman of the Victorian Railways Commissioners gave an inspiring address before the Citrus Convention. He urged growers to pay heed to the advice tendered by the visiting scientists. Growers must maintain and strengthen their organisation. The Railway Department purchased 40,000 cases last year. Since the Department began selling they had disposed of 4,500,000 drinks. On one odd day they sold between 16,000 and 20,000 drinks. The Department purchased all its fruit from association packing sheds. They would not deal with individual growers. Growers must pay heed to quality. Any differences the growers had between themselves should be settled in conference, and they should not listen to the serpent outside. The Department was 100 per cent. with the growers.

Fruit in Hotels.

Continuing, Mr. Clapp said that associations should arrange with hotels for fruit to be placed on the tables. As a seller of fruit, he had to keep faith with his customers, as a consequence it was necessary to import Oranges during the off season in Australia. He had no desire to import Oranges, but at the present time it was necessary.

The average production of Australia was one and one-third bushels per tree. The citrus industry was in somewhat the same position as the dairying industry a few years ago. Herd testing and pure bred stock had lifted the production of butter fat per cow.

Visit of Bud Selection Expert Suggested.

Mr. Clapp stated he believed Australia would greatly benefit by a visit from Mr. A. D. Shamel, the well-known bud selection expert from the United States. We had everything to gain and nothing to lose by such a visit. The production of Oranges per tree could be lifted. Mr. Shamel had done great things for the citrus industry of California and Porto Rico, the Pineapple industry of Hawaii, the sugar industry in Hawaii and Cuba, also the Banana industry. Such a man as Mr. Shamel was badly wanted in Australia.

There was a blind period for citrus in Australia, continued Mr. Clapp, from February until May, very little citrus being available. It had been said the Queensland Oranges were available at the end of March, but these were low in sugar content and lacked color. It was highly desirable to keep citrus before the people throughout the year, otherwise they would turn to synthetic drinks. There had been talk of prohibiting citrus, but this would be a mistake until Australia could supply the need. Growers should be broadminded and have a large vision.

Railways a National Asset.

Mr. Clapp then gave convincing evidence of the value of the railway services. The primary industries and the railways were largely dependent on each other. Motor competition was unfair when it catered only for the high-priced traffic.

Railways Interest Bill.

The people could have all kinds of transport so long as they were prepared to pay for it. The interest bill on the railways amounted to £10,000 a day, and the cost of maintenance was £1,000,000 a year. The taxpayers would have to be prepared to help the Department to the extent of £800,000 at the end of June.

Faith in Australia.

In conclusion, Mr. Clapp said that he had great faith in the country; geographically it was a large continent, but from a population view-point they were very small. Suggestions had been made for subsidies to help certain industries, but if carried too far it meant a premium on inefficiency.

Concluding Comments.

THE Chairman of the Victorian Central Citrus Association Pty. Ltd. (Mr. A. W. Schwennesen) and the General Manager (Mr. J. A. Parkes) have returned to Melbourne after a tour of the Victorian citrus districts.

Speaking of the recent Interstate Citrus Convention at Mildura, Mr. Parkes stated that it was in every respect an unqualified success. There has never been a period in the history of the citrus industry when so many prominent leaders in the movement have foregathered. The lectures and addresses by scientists and public men were outstanding features of the Convention, and the educational influence on the minds of the delegates is incalculable.

The fact that the gathering was held in a citrus producing area was another important factor, as it enabled growers from other parts, whose groves were situated under entirely different soil conditions, to observe the variations in growth and cropping habits. In this connection, at the conclusion of the Convention, several Victorian representatives paid a visit to the Renmark, Berri and Waikerie areas in South Australia for the purpose of furthering their education.

The meeting together of growers from so many districts where local interests are so diversified, and the exchange of ideas on all phases of the activities of the organisation has undoubtedly created a keener Federal understanding, the influence of which will be far-reaching. Although the day sessions were fully occupied, delegates had the evenings to themselves, and on one of these, Dr. W. J. Young, Chairman of the Research Preservation Committee, arranged for the portrayal of a Development and Migration Commission film covering local operations of the "Brogdex" system for the preservation of citrus fruits.

Delegates were so impressed with the importance of the Convention that it was decided to make it an annual affair, and the next meeting will be held in some part of New South Wales. At the conclusion of the Convention a meeting of the Federal Citrus Council of Australia was held. During this sitting, it was suggested that a meeting of the Council in Sydney would help to stimulate interest in the co-operative movement in that State. Since that meeting, a letter has been received from Mr. W. Cowlishaw, President of the New South Wales Citrus Association, inviting the Council to hold its next meeting in Sydney. The invitation will probably be accepted.

THE VALUE OF ADVERTISING.

Recently the Melbourne "Herald" published a series of menus for daily diet.

In each of these, Grapefruit figured prominently.

Probably Grapefruit has never previously received such publicity in Australia.

A big demand set in, and prices rose considerably.

CITRUS FUMIGATION.

Practical Demonstrations of Various Methods.

AN INTERESTING DEMONSTRATION of fumigation was given on the evening of February 6, at the property of Mr. C. C. Whitely, Irymple, by Mr. B. Muir, Citrus Supervisor of the Mildura District, Mr. S. A. Cock, Government Citriculturist, being present, together with a large party of interested delegates to the Citrus Convention.

Mr. Cock explained the value and use of fumigation in the efficient control of red scale. All citrus fumigants have as their effective constituent hydrocyanic acid gas (H.C.N.). This gas is generated in several different ways. Mr. Cock first explained the liquid H.C.N. method which is the standard method of control in California. This is packed in glass bottles, well protected in an outer container owing to its extreme liability to explode. A bottle of this liquid is placed in an atomising machine (designed by Mr. Cock), and the dosage for the tree measured through a glass gauge into a receiving chamber. A small pump then comes into action which delivers a charge of atomised gas under the tree. This is no doubt the ideal citrus fumigant, but as it is not manufactured in this country, the consumption not being sufficiently large to warrant it, it has to be imported; also the restrictions imposed on its carriage by the shipping companies make delivery an uncertain factor for Australian economic conditions.

Citrofume, a calcium cyanide, in very light powder form was also explained, and the machine demonstrated. This material has given excellent results, but unfortunately is now off the Australian market.

Cyanogas, another calcium cyanide in powder form was also demonstrated. Following this, the use of citrus Zyklon was then explained by Mr. Muir. This material is the nearest approach to liquid H.C.N. of any fumigant, and is simply a special porous earth impregnated with liquid H.C.N., which on exposure to the atmosphere quickly gives off its gas content, merely leaving behind a harmless residue. Some care needs to be exercised in handling this material, as the gas is always ready for immediate use. Comparing this method with the virtues of liquid H.C.N., it is interesting to note that the United States Quarantine Board is one of the largest users of Zyklon for ship fumigation, notwithstanding that ample supplies of liquid H.C.N. are available in that country. An improved measuring device is available for Zyklon, and was demonstrated by the representative of the firm handling it in Australia.

Calcium cyanide in briquette form was shown and demonstrated by Mr. Muir, and the representative of the firm mentioned above, the two products, Zyklon and Calcid Briquettes, being manufactured by the same firm. The great advantage of briquettes is that they are practically fool-proof, the gas not being given off until they are placed in a small machine which grinds and blows them under the tented tree in one operation. Moreover, each briquette contains a certain quantity of gas (10. grams), and dosing is a simple and accurate matter.

Mr. Cock's remarks were followed with close interest, and he was cordially thanked.

Mr. Muir, the District Supervisor, answered many questions with regard to the demonstration of the fumigating outfits which were under the working supervision of Messrs. A. Hill and R. Griffin.

It was evident that great improvements in fumigation have been made since the days of the old "pot" method which is both cumbersome and dangerous.

At the close of the proceedings the party present enjoyed the hospitality of Mr. Whitely.

APPLE RECIPE BOOKLET.

A neat and instructive Apple recipe booklet has been just issued by the Victorian Railways Commissioners, in conjunction with the Fruitgrowers' Cool Stores' Association.

PERSONAL.

The President of the Fruit Growers' Federation of New South Wales, Brigadier-General J. Heane, is now in hospital for some weeks. General Heane has been operated upon for a serious complaint, but has progressed satisfactory, and is now well on the road to recovery.

Mr. A. V. Lyon, B.Agr., Sc., officer in charge of the Merbein Research Station, visited Leeton, N.S.W., early in February and gave an appreciated address on cultivation and irrigation practice.

Mr. Noall, Inspector of Marketing of Dried Fruits, accompanied Mr. Lyon at Leeton, and later visited the Leeton Packing Company's shed, where large extensions are being made to handle the season's crop.

Professor Goddard, who rendered conspicuous service in his researches with the Bunchy Top Banana disease, recently addressed a big meeting of Banana growers at Murwillumbah, N.S.W. While admitting the value of the Cavendish variety, he advocated growing other varieties as well, so as to provide for all tastes.

RECALL OF TRADE COMMISSIONER.

Mr. R. A. Haynes Returning from Canada.

MUCH REGRET has been expressed in commercial circles at the recall by the Federal Government of Mr. R. A. Haynes, Australian commercial representative in Canada. Mr. Haynes has had good experience in the dried and canned fruits industries, and was ably assisting to build up our trade with the Dominion.

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FOR WINTER PLANTINGS
Get into touch with us now about your winter requirements in Fruit Trees of dependable quality, true to name, and good bearers of finest marketable fruit.
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BAIRNSDALE — VICTORIA.
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Victorian Fruit Marketing Association.

Monthly Report.

The monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at C.T.A., Melbourne, on January 31.

There were present:—Growers: Messrs. E. Lawford, K. Eagle, C. M. Griffeth, W. H. Carne, J. W. Bailey and W. A. Webb; shippers: Messrs. H. G. Colombie, J. B. Mills, A. S. M. Harrison, F. R. Mellor, F. Cave. The President, Mr. H. G. Colombie, occupied the chair.

Minutes.—The minutes of the previous meeting were read and confirmed on the motion of Messrs. Carne and Harrison.

Secretaryship.—Six applicants were interviewed, a preferential vote was taken. Mr. R. E. Boardman was elected.

Mr. H. W. James Thanked.—On the motion of Mr. Carne, seconded by Mr. Webb, it was decided that the best thanks of the Association be tendered to Mr. H. W. James for his services in connection with the organising work further to express regret that he was unwell, and hoping for his speedy recovery.

The meeting adjourned from 1 p.m. till 2.15.

On resuming, an apology was received from Mr. F. Cave.

Canadian Delegation.—The Chairman introduced the Canadian Trade Delegation, Messrs. McDonald, Robson and Andrews, who were accompanied by Mr. C. H. Tutton.

Mr. McDonald urged closer reciprocal trade between Canada and Australia and an improved trade treaty. Canada was now receiving substantial quantities of Australian canned and other fruit, and would accept our Apples if we would accept theirs. Canada markets her Apples in bulk seasonably, turning same promptly into cash, and would like to sell to Australia in the flush of their season; then seasonably Australia could sell her Apples to Canada. There was absolutely no danger of fireblight. The Apples would come from clean districts and be subject to rigid inspection. Canadian Apples were sent to every country in the world except Australia. New Zealand was finding a good market in Canada for her Apples. Australia could do likewise.

Mr. C. H. Tutton suggested that the Customs Department be approached asking that no duty be charged on imported cases on a guarantee being given that they would be exported within six months. Otherwise it would be necessary to pay £20 duty per 1,000 boxes.

A vote of thanks was carried at the instance of Messrs. Mills, Griffeth and Bailey.

Softwood Shooks.—It was decided, on the motion of Messrs. Bailey and Harrison, that the Minister for Customs be approached to permit the entry of softwood shooks, without payment of duty under guarantee that the cases would be exported within six months, after which time duty to be paid.

Hail-marked Fruit.—After discussion, weighing advisability or otherwise of sending hail-marked fruit overseas, it was decided, on the motion of Mr. Mellor, seconded by Mr. Harrison, to write to Mr. E. E. Meeking, Senior Fruit Inspector, asking for a definite statement regarding the Government's intention—(1) as to the permission to export hail-marked fruit; (2) would it be possible to send the hail-marked fruit in cases specially stencilled "Hail-marked"? (3) whether the fruit could go in "plain" grade?

The Handling of Fruit.—Mr. J. B. Mills reported having attended a recent Conference dealing with fruit handling and transport. There were present representatives of shipping companies, stevedoring companies, Agricultural Departmental officers, the railways, and the fruit exporters. Mr. M. J. Canny, of the Railways Department, presided.

This was one of the most important conferences yet held regarding the handling of fruit, and much good was expected as the outcome. Stevedores had noted that much of the fruit exported this season would be in Canadian standard cases, extra care being necessary in the handling and stowing in ships; the Railway Department also promised helpful attention to the handling and stowage in trucks; there were more louvre trucks available than at any previous time. Pears in refrigerated trucks would be given every attention. Stevedores said their work at ship's side and in the holds would be done with extra care; they now had efficient labor.

Railway Trucks, Uneven Floors.—It was decided to write to the Railway Department requesting that the floors of trucks for conveying fruit be as even as possible—this matter having been overlooked at the recent Conference.

Number of Cases to the Ton.—Mr. Carne stated that there should be a greater number of softwood cases carried to the ton as compared with hardwood. At present 40 hardwoods were reckoned to the ton; on the softwood cases the number should be at least 46. His tests had showed that it took from 46 to 50 cases to make a ton.

Mr. Mills stated this matter had been discussed at the Conference, and the Railway Department had under review allowing 45 cases to the ton.

Pear Shipments.—Mr. F. R. Mellor submitted the following report:—

Report of Pear Shippers' Conference Held January 17, 1930.

> **Present.**—Growers: Messrs. E. Lawford, J. W. Bailey, W. Thiele, John Tully. Exporters: Messrs. Mills, Russell, McLean, Scott, Mellor, Parnham, and Harrison.
>
> Mr. Lawford was elected Chairman.
>
> The following resolutions were agreed to, namely:—
>
> That a declaration from the grower be attached to each advice note sent to each agent that all Pears despatched from country stores have been pre-cooled for a sufficient time before shipment, and that agents see that Pears pre-cooled in the Government cool stores be similarly treated.
>
> That packed fruit should be pre-cooled for not less than seven days, and unpacked fruit for not less than four days.
>
> That we recommend the use of the softwood long bushel case for the shipment of Pears for the reasons that expenses are lower, stowage easier, and results have been proved satisfactory.

That we re-affirm that Pear temperatures should be maintained at 29 and 31 degrees on board ship.

The report was adopted, and it was decided to send a copy to each exporter, also to Mr. S. J. Perry.

Pre-cooling Committee.—Mr. Bailey reported that it was desired to have two chambers on one boat for testing purposes. Enquiries had been made, and he was awaiting further word from Mr. Parnham.

Mr. Harrison stated it was probably too late to do anything further this season.

Australian Conference of Fruitgrowers.—Mr. Boardman reported, in reply to the letter from the V.F.M.A., that the basis of representation at the Australian Conference of Fruitgrowers was 3 voting delegates from each State. So far, the Cool Stores' Association had guaranteed that Victoria would be represented. It was decided to confer with the Cool Stores' Association regarding representation and to report at next meeting.

Shipping Programme.—Mr. Mills reported that certain difficulties were being experienced with regard to the finalising of the fruit shipping programme. Victoria's estimates of 930,000 cases were originally based on the early good prospects, but seasonal vicissitudes, frost, hail, sunburn and black spot had materially reduced the quantity available for export. The Rationalisation Committee in Sydney was asking for definite guarantees that the space applied for would be fulfilled. Further, the steamer programmes were largely dependent on the roster of wool sales. It would be of material service if growers would give explicit advices as to the quantities available for export.

There was a strong demand in other States for shipping space for fruit.

It was decided, on the motion of Messrs. Carne and Mellor, to send a letter to the press on this subject.

Deputation to Minister of Agriculture.—Mr. Webb reported that a deputation convened by the Mt. Dandenong Fruitgrowers' Association would wait on the Victorian Minister for Agriculture on February 4 to request more scientific research into orchard pests. The President and Mr. Mills were appointed to attend.

Hail and Frost Insurance.—The President reported that enquiries were being made in insurance circles both here and overseas and a reply would be to hand shortly.

To Increase Membership.—It was decided to prepare a report detailing the work already accomplished by the Association, also the work in hand to form the basis of an appeal to secure more members; each shipper to be asked to send in lists of growers; the Secretary to meet the Vigilance Committee to draw up a programme.

Minutes of Meetings.—It was decided, on the motion of Messrs. Webb and Mills, that copies of minutes be sent to every member of the Committee.

Mr. Colombie's Visit Abroad.—Cordial references were made to Mr. Colombie's services in organising the V.F.M.A. Messrs. Mellor, Mills and Carne wished him a pleasant and profitable time on his trip abroad. Mr. Colombie suitably responded, and the meeting then closed.

HAIL-MARKED FRUIT.

Can be Sent in "Plain" Grade If In Good Condition and Skin Unbroken.

In response to the letter from the V.F.M.A., a letter has been received from the Senior Fruit Inspector, Mr. E. E. Meeking, dated February 6, as follows:—

Secretary, Victorian Fruit Marketing Association.

Dear Sir,

In reply to your enquiry of the 1st inst., on the above, I have to advise that the Commerce Export Regulations provide that under "Plain" grade, Apples or Pears affected to 100 per cent. by blemishes such as hail marks, limb rubs, black spot, fungus or caterpillar marks, may be permitted export provided that such blemishes do not exceed in the total aggregate the area contained in a circle of one ½ inch in diameter, and provided also that the skin of the fruit is unbroken.

The marking of cases containing hail-marked fruit with the words "hail marked" will not facilitate the export of such fruit, as if the conditions set out in the regulations regarding "Plain Grade" are not complied with, export of the fruit cannot be permitted.

I have received no instructions from those in authority to allow a relaxation of the regulations with regard to the export of hail-marked fruit.

I may mention that the application of the regulations with respect to hail-marked fruit is more difficult than is the case with fruit affected with black spot, as blemishes caused by the latter have a tendency to increase even in cool storage, whilst, on the contrary, hail mark blemishes have a tendency to diminish with the development and growth of the fruit. As you are probably aware, fruit in the early stages of growth may be so severely injured by hail mark that the skin is broken in several places, and yet by the time full maturity is reached the scars have calloused over, which renders the skin at the point of injury tougher than the unaffected portion.

Sometimes the callousing is sloughed away and beyond the dent left in the skin (which, of course, affects the shapeliness of the fruit and thereby detracts from its appearance), the skin of the fruit cannot be considered broken any more than a bone which has been broken and which has knitted, or a human or animal skin which has been wounded and over which a scar has formed.

The object of the regulations is to prevent the export of fruit blemished to such an extent as would be likely to depreciate its market value.

Yours faithfully,
E. E. Meeking,
Senior Fruit Inspector.

Memo.—Members are invited to write to the Secretary on matters requiring attention.

New members are desired, so that the V.F.M.A. may increase its usefulness.

R. E. Boardman,
Secretary, V.F.M.A.

78a Victoria-street,
Near Russell-street,
Melbourne.

SHOWS TO COME.

Beechworth.—March 6.
Somerville Fruit Show.—March 12.
Red Hill.—March 19.
Castlemaine.—March 20.
Young, N.S.W.—March 26 and 27.
Croydon.—March 28 and 29.
Garden Week, Melbourne.—April 1—5
Mitcham.—April 5.
Bendigo.—April 9.
Lilydale.—April 9.
Royal Sydney Show.—April 15-26.
R.H.S. Fruit and Flower Show.—April 29 and 30.

Secretaries are requested to kindly forward show dates for publication. This applies to shows in all the Australian States and New Zealand.

DINNER TO MR. H. G. COLOMBIE.

A REPRESENTATIVE gathering of about forty Victorian orchardists and exporters tendered a dinner to Mr. H. G. Colombie on February 7, 1930, at the Hotel Australia. The opportunity was taken to wish him "bon voyage," prior to his departure for England and the Continent, for which countries he left Melbourne on February 11. Mr. A. S. Harrison occupied the chair. Amongst those present were Messrs. E. J. Mulvaney (Department of Markets and Migration), J. M. Ward and E. E. Meeking (Department of Agriculture), growers from most of the leading fruit centres and representative exporters.

Gathering of orchardists and exporters, who assembled to wish "bon voyage" to Mr. H. G. Colombie, on February 7.

The toast of our "Guest" (Mr. H. G. Colombie) was proposed by Mr. F. Thomas, and supported by Messrs. J. B. Mills, R. E. Fowler, J. W. Bailey, and N. N. McLean.

Mr. Colombie, in responding to the toast of "Our Guest," referred to the improvement that had taken place in the packing and marketing of Victorian fruit, and trusted this would continue. This improvement had taken place notwithstanding black spot and other disabilities. He stressed the need for more research work. The fruitgrowing industry is worth millions of pounds and kept a multitude in employment, and deserved every attention. He was quite confident of the future possibilities of the fruit industry. In conclusion, he thanked all present for their good wishes.

The toast of the Department of Migration and Development was proposed by Mr. C. J. Parnham, supported by Mr. C. M. Griffith and responded to by Mr. E. J. Mulvaney. He congratulated the V.F.M.A. on the work they were doing, and said that the Government looked to a body such as they for guidance on matters effecting the industry.

The toast of the Department of Agriculture was proposed by Mr. T. E. Butler, supported by Mr. J. J. Ahern, and responded to by Messrs. J. M. Ward and E. E. Meeking.

A presentation of a set of pipes was made to Mr. Colombie on behalf of the gathering by Mr. S. E. Scott, supported by Mr. W. H. Archer.

The toast "The Growers" was proposed by Mr. J. W. Barker, who hoped that growers would all join up with the Victorian Fruit Marketing Association. This body should be the means of bringing growers and shippers together. Mr. A. G. Lester supported the toast.

The toast of the "Chairman" was proposed by Mr. K. Eagle, supported by Mr. D. P. Murray.

A very happy gathering was brought to conclusion by all joining hands and singing "Auld Lang Syne."

HARCOURT.

GREAT SATISFACTION is expressed by all growers at the splendid rain that has fallen this month. Though we were able to keep the fruit moving with irrigation, there was a lack of color in the fruit. This will be remedied by the rain.

The Agricultural Department have started packing classes for children attending the Harcourt and Harcourt North State schools.

The Harcourt Fruit Supply Society Ltd., are negotiating with London firms for the purchase of Apples, to be disposed of by direct distribution. A small consignment is being sent this season mainly for advertising purposes.

Apples for Glasgow.

Following the visit of Mr. Harold M. Ford last year, on behalf of various organisations in Glasgow, the Harcourt Fruit Supply Society Ltd. communicated with several fruit brokers in that city. The result of Mr. Ford's visit is that shipments totalling 60,000 cases are being sent from Victoria by direct steamers to Glasgow. Of this total, Harcourt is supplying nearly 10,000 cases.

L. & H. Williams & Co., fruit brokers, state that the principal varieties required are Dunn's, Jonathan and Cleopatra, and emphasise the importance of sending in the softwood cases, with an attractive colored label.

The fruit is being forwarded by five steamers, and will be the first Australian Apples to be sent direct to Glasgow. Previous consignments to that city being made via London or Liverpool.

Great interest is being taken in these shipments by the Glasgow brokers and there is every probability of an extensive trade in Australian fruits being built up, to the advantage of both the producer and the consumer.—Jas. H. Lang.

MITCHAM (VIC.) SHOW.

An excellent fruit and flower show has been organised by the Mitcham (Vic.), Returned Soldiers, to be held on April 5, in the Mitcham Memorial Hall. Schedules available from the Hon. Sec., Mr. E. V. Panelli, Doncaster East Road, Mitcham.

The Annual Conference of the Victorian Fruitgrowers' Cool Stores Association will be held during August. Further details later.

Fruitgrowers' Cool Stores Association of Victoria.

THE quarterly meeting of the Fruitgrowers' Cool Stores Association of Victoria, was held in Melbourne on February 20.

Mr. W. Mock presided. There were also present:—Messrs. G. Fankhauser (Burwood East); H. L. Tomkins and R. Langley (Croydon); R. M. Finlay (Diamond Creek); J. J. Tully, R. E. Petty and Ed. Daws (Doncaster Central); J. H. Lang (Harcourt); J. M. Watt (Hastings); J. J. Tully, F. Petty, A. Thiele (Orchardists); H. Pump & J. G. Aird (Ringwood); R. Hillhouse (Templestowe); T. W. White (Somerville); C. Wallace and F. J. Byrne (Wantirna); E. H. Hatfield and A. E. Hocking (Private Stores); R. E. Boardman (representing V.F.M.A.); and the Secretary (Mr. J. G. Aird).

Rail or Boat?—The Secretary reported having interviewed the Railway Department, and was in correspondence with the N.S.W. Railways relating to the request for a reduction of freights on interstate fruit. The reply not being satisfactory, it was resolved that the Secretary again approach the Railways Department and request that the position be reconsidered, also that some effort be made to meet the competitive rates offered by the shipping companies.

Fruit and Flower Show.—Mr. R. E. Boardman reported that arrangements for the holding of the Fruit Show in Melbourne Town Hall on April 29 and 30, 1930, was well in hand, and submitted the draft schedule. The report be received and adopted.

Apple Recipe Booklet.—The Secretary reported that the Apple Recipes Booklets issued by the Victorian Railways Department, in conjunction with this Association, are now available. Stores requiring supplies of this issue should make immediate application.

Association Finances.—The Committee appointed to report on the Association's finances recommended that fees be based on the case capacity of each store, and that the rate be 5/- per 1,000 case capacity.

This recommendation was freely discussed. A suggestion being made that a maximum amount be fixed for large stores. It was decided to remit the matter to the annual conference, and that a sub-committee wait on the directors of all dissentient stores to discuss the recommendation. The President and Messrs. A. E. Hocking and E. H. Hatfield be appointed to this Committee.

Farmers' Convention.—Messrs. A. E. Hocking and G. F. Fankhauser, and J. H. Lang, were appointed delegates.

Australian Conference of Fruitgrowers.—Mr. J. H. Lang was appointed delegate. It was decided to place on the agenda paper—"The general principle of the reduction of duties on orchard requisites not manufactured in Australia.

Victorian Fruit and Flower Show.

Big Event in Melbourne Town Hall, April 29 and 30.

IT IS SOME YEARS since a comprehensive fruit show was held in Melbourne. Fruitgrowers now have the opportunity of supporting the big Fruit and Flower Show which is to be held at the Melbourne Town Hall, April 29 and 30, under the auspices of the Royal Horticultural Society of Victoria and the Fruitgrowers' Cool Stores Association.

The R.H.S. will arrange for a bright showing of Chrysanthemums and there will also be exhibits of Orchids and horticultural displays from nurseries.

Fruit will form the bulk of the exhibits, the idea being to advertise the industry and to induce a greater consumption of fruit. A comprehensive schedule is in course of preparation. Among other items this provides for one case export Apples wrapped and packed His Majesty the King, 1st prize, £2/2/-. Four cases export Apples, wrapped and packed for export (two distinct varieties, two cases of each), 1st prize £10/10/-, second prize £5/5/-, third prize £2/2/-; 6 trays of Apples open to any cool store in Victoria, 1st prize, special trophy value £4/4/- donated by W. C. Thomas & Sons, Tynong; 2nd prize trophy value £2/2/-, donated by the Graceburn Valley Orchard Co., Healesville; 6 trays Pears, distinct varieties, open to any cool stores in Victoria; best two trays Apples of the following varieties: Jonathan, London Pippin, Stewarts, Granny Smith, Rome Beauty, Red Rome Beauty, any other variety.

Best single tray of all the foregoing varieties. Fruit may be polished.

Best tray of Pears, Packhams, B. Bosc, Winter Nelis, Josephine, Kieffer, Howell, any other variety.

Prizes are also offered for Grapes, light and dark, Peaches, Quinces, Lemons, Passion Fruit, Plums.

The Emily McPherson College of Domestic Economy is kindly lending assistance by providing judges for the cookery section for which good prizes are offered in order to create interest among the suburban housewives.

Lecturettes are being arranged, and it is hoped the talks will be broadcast. Altogether a big effort is being made to give due emphasis to the fruit industry, and the organisers look forward with confidence to the hearty support of the growers and the trade. The Secretary of the Fruit Section is Mr. R. E. Boardman, "Fruit World," Box 1944, G.P.O., Melbourne.

SOUTHERN FRUIT GROWERS' ASSOCIATION.

At the Executive Meeting of the Southern Fruitgrowers' Association, held on February 6, at Box Hill, Mr. R. J. Lorimer took the chair in the absence of the president. There were also present Messrs. R. M. Finlay, A. Leber, G. Mock, and the Secretary. Apologies from W. Mock, J. H. Lang and W. A. Webb.

New Victoria Market.—A letter was read from Mr. C. George, Secretary for the Market Gardeners' Association, drawing attention to the plans of proposed buildings about to be erected to accommodate the Western Market when removed to the Victorian Marekt site, no provision being made for extra accommodation for growers, many having waited for many years, but not being able to procure stands.

After full discussion, it was decided to oppose the scheme as it affects the stores facing Queen-street, No. 41 to 50 inclusive, as it was considered the plans would interfere with future extension of sheds for growers.

The erection of more shed accommodation was urgently recommended.

Horse-drawn Vehicles.—The action of the Markets Committee of the City Council in dealing with horse-drawn vehicles as from April 1, was discussed, and it was resolved that a further protest be sent, asking that the matter be further postponed,

Codlin Moth Control.

Remarkable Results from Spray.

(By G. W. Weasea, Trinidad, Washington, U.S.A.)

Apple-growers will be intensely interested in the information contained in Mr. Weasea's letter, which we reprint just as received. From all available information, Mr. Weasea has the world's record for codlin moth control.

Mr. Weasea is Secretary of the Crescent Bar Local of the Wenatchee District Co-operative Association.—"Better Fruit."

I FEEL it my duty that the following facts in remarkable codlin moth control be given to the fruit industry.

"My orchard is located in one of the worst codlin moth infested areas of the Wenatchee district (Crescent Bar), and I believe as bad as any place in the North-West. Then considering that my crop of Apples was 30 per cent. wormy last year, and this year (1929) is considered one of the worst years on record for codlin moth infestation, my results appear to be miraculous.

"Results: After packing 900 boxes of Apples through our co-operative warehouse, where culling is rigid, there was only one box of culls discarded because of worm infestation. This shows that the control was almost perfect, as percentage of infestation was nil.

"My spray programme was as follows:—

"Three pounds of lead per 100 gallons, to which was added one half pound of Fluxit and one half pint of black-leaf 40 per cent. However, this was used only in the first four cover sprays. This contributed to aid in the control of the first brood, thus greatly minimising the damage from the second brood. I used eight cover sprays and one calyx spray.

"Regardless of this apparent excess of residue, it came off very easily, as shown by the chemical analysis of .005 grains lead per pound of Apples, or far below the export tolerance.

"The Apples were washed in the customary acid bath treatment. Horticultural experts when visiting my orchard this summer remarked about the heavy smooth coverage of lead on the Apples. Expert Apple pickers remarked that the Apples were the cleanest from worms of any Apples they have ever picked.

"It is well to mention that a VERY, VERY thorough job of spraying obtained. Spraying was done from the inside of the tree first and thoroughly, then again from the outside. Generally speaking, we do not spray thoroughly enough; we think we do, but we kid ourselves.

"Just what was there in this spray programme that caused this remarkable achievement? Have I hit on the right combination by accident or what? The Fluxit used certainly left a heavy coating of lead. Heretofore arsenate of lead alone has never controlled in badly infested areas like mine, but this combination does, and WHY?"

Mr. Weasea, who has been on the place seven years, and before that time was a fireman for the Great Northern between Leavenworth and Wilson Creek, not knowing just why he obtained such remarkable results, says he would like to have horticultural authorities explain.

Weasea had only 53 scaly Apples, 120 worms, and very few stings.

Insect Pest Control.

Deputation Requests More Research Work.

Agricultural Department Understaffed.

A REPRESENTATIVE DEPUTATION waited on the Victorian Minister for Agriculture (Mr. Slater), on February 4, urging that trained scientists be engaged to investigate the serious pests which attack orchards and berry farms. It was stated the Agricultural Department was seriously understaffed, particularly in the entomological section. There were no means of coping with pests when they came in myriads.

The Assistant Minister (Mr. Pollard), was present, also the Director of Agriculture (Dr. Cameron), and the Superintendent of Agriculture (Mr. Mullett). Mr. J. Valantine, Vice-President of the Mt. Dandenong Fruitgrowers' Association, quoted Senator Daly's estimate that an annual loss of £20,000,000 was sustained by the Commonwealth through the ravages of pests. Continuing, Mr. Valantine pointed out the disastrous losses through thrips and other pests.

Mr. J. H. Lang, Harcourt, said that orchardists in Harcourt lost about 40,000 cases of Apples and Pears annually through the codlin moth. Research was needed to effect biological control.

Mr. E. Blackburn, Secretary, Northern Victorian Fruitgrowers' Association, urged that sufficient salaries be paid to attract the right men. In addition to pest control, investigations into root stocks were urgently needed.

The President of the Mt. Dandenong Fruit Growers' Association, Mr. W. Jeeves, regretted that Mr. Levick, Entomologist, had left the Department, as he was not offered a permanent position.

Mr. W. A. Webb, President of the Southern Fruitgrowers' Association, supported the request for consistent research into orchard problems.

Mr. Knox, M.L.A., who introduced the deputation, said growers were not asking for financial assistance, but for scientific investigations.

In reply, the Minister agreed that research work was the duty of the Department of Agriculture. It was hopeless for individual growers to undertake research work to combat the increasing hordes of insect pests and fungus diseases. With regard to staff matters, under the Agricultural Education Act, five graduates would be coming from the University and one of these would be available for entomological work. Co-operation between the States and the Commonwealth was imperative, and scientists were earnestly on duty. Victoria was joined in this work, but the Victorian Government would not shelter behind the Commonwealth with regard to its responsibilities to the growers.

Stationary Spray Plants.

Successful in U.S.A. and New Zealand - Australia is Interested.

Electricity for Orchard Spraying.

(Contributed by the State Electricity Commission of Victoria.)

THE use and development of a stationary system of orchard spraying has created widespread interest among orchardists. They see in it the possible solution of the problem of a more satisfactory, efficient and economic means of controlling orchard insects and diseases.

The present method, involving the use of horse-drawn engine-driven outfits, has many disadvantages, among which are the purely horticultural objections of:—

(a) Damage to trees and fruit.
(b) Inability to spray while irrigating or "furrowing out."
(c) "Packing" of the soil.
(d) Damage to green manure crops.

Serious as these disadvantages may be, they are equalled in importance by the incidental mechanical troubles always associated with portable plants. Pump, engine and vat are subject to extreme wear and tear on rough ground, and as every orchardist knows, it is seldom that a day's spraying is got through without some necessity for repairs and adjustments with the accompanying waste of time when it can least be afforded.

The effect of the spray solution, in the mist of which the engine has continually to operate, is highly detrimental to its working efficiency, and depreciation occurs at a very rapid rate. Further, and perhaps most serious objection of all, the time lost in refilling and travelling between the orchard and the supply point accounts for a large proportion of the total cost of spraying, and reduced by as much as 50 per cent. the time usefully occupied.

New Methods Essential.

It is not surprising that orchardists are looking round for a means of simplifying their present methods, and reducing the present high cost of their spraying operations. The utilisation of the stationary plant bids fair to accomplish these objects, particularly where given a reliable and economical source of power.

Power is essential. The use of the tiny 1¼ to 2 h.p. engine with a low pressure pump has been rendered obsolescent in the commercial orchards overseas by the introduction of the "spray gun." The latter needs high pressures, ample flow and adequate power behind it, and this requires machinery which cannot be conveniently transported about an orchard. With a fixed plant, and a pipe reticulated system, however, the ideal conditions obtain; we are not limited by weight and portability to ineffective pressures and small volume of flow, and we have the very great advantage that we can in a great many instances utilise electricity for power with its attendant economy, reliability and simplicity of control.

United States Growers Show How.

The rapidity with which stationary spray plants are becoming popular in other countries is illustrated by the example of the Wenatchee district in Washington. In that district alone 325 stationary plants were sold during the year 1925, as against 18 portable. Of the stationary outfits, 270 or 83 **per cent., were electrically** driven. It is now estimated that more than half of the 3,000 Apple-growers in the Wenatchee Valley use fixed plants, and that almost every one within economic distance and an electric supply line is electrically operated.

Power Must Be Ample and Dependable.

The size of plant is, of course, governed by the size of orchard, and the number of spray guns it is intended to operate concurrently. It is also affected by the height to which the solution has to be reticulated. In a general way, however, the 5 h.p. plant is the most popular, and is entirely suitable for orchards of 15—30 acres. A plant of this size would consist of a four-cylinder 2½in. x 2½in. single acting pump running at about 70 revolutions per minute, coupled through suitable reduction gearing to a 5 h.p. motor running at 1,420 revolutions per minute. A pressure of upwards of 300 lbs. per square inch could be obtained, and nearly twelve gallons per minute could be delivered. The cost of this section of the plant would be about £150, allowing for a single phase A.C. motor, and about £20 less if a three phase supply were available.

Speed Up the Application.

A suitable type of spray gun having a one-eighth inch orifice will deliver about 5½ gallons per minute under 300 lbs. pressure, and will give a mist spray up to about 20 ft. high. It is claimed that under average conditions, 1,500 gallons can be put on the trees by one man in eight hours, but it must be noted that much heavier applications of spray are given in the United States, and the time would be increased if the trees were small. Tests, however, carried out by one Agricultural College in the United States showed that for an average application of three gallons per tree about four acres could be covered by one man with a boy helping him with the hose, in one day. There is, therefore, no doubt about the comparative economy of operation.

Capital costs are somewhat higher than with portable outfits, but not nearly so much more as might be supposed—a typical installation in the State of Washington, consisting of pump, motor, control equipment and tank with piping laid over 20 acres (600 ft. 1in. and 5,000 ft. of ¾in.) costs 1,400 dollars, or, say, £280. The same plant would cost more here, but the following estimate for a 25-acre installation is thought to be reasonable:—

5 h.p. motor and pump with control equipment	£150
1,000 gallon concrete tank and agitator	£25
Piping (black wrought iron)—	
1,000 ft. 1in., 5,000 ft. ¾in. ..	£60
Valves and fittings	£25
Hose, 120 ft., and gun	£10
Ploughing in and labor	£50
	£320

This capital cost is, of course, little greater than that which would be invested in portable outfits sufficient to do the same acreage. It is probably much less if one takes time of operation into consideration.

Summed up, the method offers definite possibilities of practical and economic value to those growers who are favorably situated in proximity to the power lines that are now being rapidly extended throughout the more closely settled districts. In a further article greater detail will be given of the construction and installation of the plants in general use overseas and their adaptation to Australian conditions.

New South Wales.

Banana Grading - Goulburn Valley Fruits in Sydney Citrus Marketing - Apples and Pears

(By Our Correspondent.)

OUR Minister for Agriculture has had to give the Queensland Banana men a little reminder that grading regulations must be observed, and the growers of this delectable fruit are virtuously indignant. It is needless to remark that the Queensland Government is also under a cloud, for when growers and grading regulations meet at the cross roads, everybody within sound or sight has to share a piece of wrath. Length, it seems, is the hall-mark of grade, and it is therefore presumed that in all other respects Banananas are otherwise equal. Which means that one 6½ by 4¼ is far superior from the consumers' point of view than one 9 x 4¼—according to the grower.

The Governments (who, of course, don't grow them), say "the longer the better," and apparently pay no attention to girth. Growers naturally resent the undue prominence which length gains to the detriment of breadth, and have expressed an intention to dispute the prevailing ideas and advocate reversion to the old system of grading. Enormous quantities of Bananas have appeared in Sydney this season, and the public have certainly taken them by face value rather than by the use of a foot rule. In no season before have such large quantities of fruits passed successfully through our markets, and although prices have not been high, they certainly are in excess of anticipations.

Goulburn Valley Fruits.

The writer has attended during the unloading of Goulburn Valley fruits, and is pleased to state that the organisation at the Sydney end is all that can be desired. Trains arrive very early in the morning, but are met by a staff ready to at once commence operations.

Fruit has opened exceedingly well where special care has been exercised, but on isolated occasions a loose nail or defective packer has resulted in the total loss of a bushel of fruit. Some of these must have caused concern at time of nailing down, because the defect was so easily traceable, and it appears that they were hopefully allowed to go forward in the trust that they would hold together during transit.

One case which can thus collapse imperils many others in the consignment, and holds portents for juicy damage to many others. Those which are securely nailed and yet have faulty timbers, are also a menace. Growers cannot be too careful when fruits have to be transhipped as all these have to be.

Mr. Wills, the local representative, very efficiently effects clearances, and growers have much to thank him for. The bulk of the fruit was acceptable on the markets, but quite a fair quantity of inferior or unsuitable packs could not possibly have paid expenses.

Good weather has assisted sales throughout this season, and it is hoped that our citrus men will meet with an equally favorable time when our day of reciprocity arrives.

Hawkesbury Citrus Growers.

Citrus growers in the Hawkesbury Valley are once more talking of co-operation, something much to be desired in that prolific centre. It is probable that close association with the Sydney markets has mitigated against the success of all previous efforts, although it cannot be said that any of these have been enthusiastic. On two occasions in recent years the growers there have liberally subscribed to outside ventures which promised great things for them, but each has proved a very costly "dud." This has given the movement for self-help a severe setback.

It is thought that leaders of the citrus co-operative effort now functioning so well for growers so associated might make a further effort to secure increased strength, and in this respect it is noted that the Central Citrus Association does very well indeed for the comparatively few members it can boast of.

Shortage of Mandarins appears to be the principal drawback, and an augmentation of growers who specialise in this class of fruit would give the C.C.A. a very strong hand.

Without question, the day is dawning when citrus men in N.S.W. will be linked together as they should be, and the coming conference in May will probably stage another fight for the establishment of a citrus section in the Federation. This will do more to bring them together than anything else. At present the appearance of C.C.A. men in all matters pertaining to the industry is necessary because the other growers—very much in the majority—do not assert themselves, and I am convinced that less bitterness will prevail when all citrus men talk citrus matters on the basis of better understandings.

Summer Fruits and Citrus.

Crops of summer fruits are now well away from the orchards, and the season has been much better (financially) than expected. Growers of Apples and citrus are now hoping that even though prices will not be quite high enough, the fruits will clear as well as summer fruits have done. There is no reason to doubt that this will be so, although I think citrus will be hard to clear on occasion. Quality will once more determine the market, and I have observed that indications favor plenty of good fruit.

Mandarins are filling out well, and promise great crops in some orchards, but very small ones where the second crop has remained on the trees. This is particularly noticeable on rich river flats, where very heavy false crops set. Those now appearing on the market are very small, but delicious to eat. It is a good thing that growers have held them back whilst the markets have been so congested with other fruits.

Second crop Valencias are of fair quality, and have colored better than expected. The use of ethelyne gas has worked wonders for many men who have not previously tried it out, and is growing in popularity. It is to be hoped that caution will mark the use of this artificial coloring when the new season opens, as, without exception, all fruits to appear this year have included immature consignments. With citrus an artificial coloring may completely deceive buyers—by whom I mean the ultimate consumers—and this should not be tolerated by growers on any account. Sour silettas on a cold wet day, no matter how beautifully rich in their pale yellow hue, will accentuate any resolve to stand off Oranges for a month or two.

Apples and Pears.

Apple crops in Bathurst and Goulburn districts promise very well now that fair rains have fallen. No appreciable damage by hail or wind has so far been done, and all bids fair towards sound crops of quality fruits. Some of the orchards—especially those with shelter, are laden. The fruit has filled out well, and is now mostly well into the color turn.

Pears will be very heavy in supply as usual, but it can safely be said that seldom have they been of better quality.

The growing season for both pome and citrus has been quite favorable generally, and the men who have conserved moisture have little to complain of.

PRICE OF FERTILISERS.

Reduction Recommended.

THE TARIFF BOARD has submitted a report to the Acting Minister for Trade and Customs (Mr. Forde) in regard to the price of fertilisers. The report states the prices are too high, but the companies are not charged with profiteering. A reduction of 8/- per ton is recommended: (a) by the elimination of payment to agents for services that are unnecessary, 3/-; (b) by a reduction of manufacturers' profits, 5/-

Sulphate of Ammonia—Reduction in Price Desired.

A majority report stated that the Board was of the opinion that the prices at which sulphate of ammonia had been sold in Australia were high compared with other countries, but were not unfair. For that reason the Chairman (Mr. McConaghy) and Mr. Guy recommended that the existing duty on sulphate of ammonia should not be altered, but that provisions should be made in a special Act of Parliament for the payment of rebate of duty when the Minister was satisfied that the importations were necessary to make up the amount by which Australian production fell short of requirements.

In a minority report, Mr. S. Berchdolt and Mr. W. S. Kelly said they were convinced that the best interests of the country would be served by enabling the farming community to obtain this essential raw material at the lowest possible rate, and this could best be effected by amending the tariff. A large number of our primary producers were struggling against hard and severe conditions. Many of them had to place their products on the world's markets, and there compete with producers who had much lower costs to carry.

My wife's a great cook; she's what you'd call a religious cook. Everything she sends up is either a sacrifice or a burnt offering.

CITRUS IMPORTATIONS.

Views of N.S.W. Central Citrus Association.

(By H. G. Such.)

URGENT REPRESENTATIONS have been made for some years to the Federal Government to prevent the importation of citrus fruits, which at this time of the season, materially interfere with the returns to the citrus growers, particularly those of New South Wales. The demand for Oranges in the summer is not great, and there is in most years a sufficient supply of late fruit, either from orchards specially situated as regards altitude or climate, such as Kurrajong, Mangrove Mountain, or a second crop like that of this season, which produces enough fruit to more than supply the usual needs of the Australian public.

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Lemons also are never really needed from overseas, the Lemon being a fruit which is in season the whole of the year round in one district or another. Whilst it is claimed that Lemons must be imported because of the inferior keeping quality of New South Wales or other States' fruit, the fact remains that during nine months in the year, when importations are not profitable to the importers, the Australian article is considered sufficiently satisfactory.

It is interesting to note the solicitude of the Federal Authorities towards the workers in the timber industry, to protect whom the Government has recently presented the citrus growers with an enormous increase in duty on their case costs. Surely the citrus grower is entitled to protection on the one hand, as much as the timber worker is cared for.

Importations of citrus into New South Wales alone materially reduce the value of the top grades of New South Wales fruit, and by displacing a given quantity of lower grade fruit, prevent the marketing of much that would otherwise return a payable price to the grower. It behoves all interested to use what pressure is possible to persuade the Federal Government to prevent the importation of Italian or American citrus fruits wholly at the expense of the citrus grower.

Summer Fruits.

The month of February has seen a return to a condition of oversupply of summer fruits. Practically every district in New South Wales this year had a bounteous crop of Apricots, Peaches, Plums, Nectarines, early Apples and Pears. As a consequence, the public has obtained fruit which returns the grower to a large extent less than the cost of production. Coincident with this is the fact that in this month the financial crisis which appears to be pending, is being realised, and a general shortening in demand for all luxuries as well as necessities is notable, particularly in respect to fruit.

Market agents stated that the past few weeks, where buyers in previous seasons were taking half dozen cases of variety at one time, they are now restricting their purchases to single cases. Notwithstanding this, however, by one means or another, notably through barrow activities, most of the fruit has been sold, and comparatively little gone to the tip. Interstate shippers, particularly from Victoria, must, however, have felt the effect of low prices and oversupply, as enormous quantities of forward William Pears and Elberta Peaches came from over the border this month, and values consequently were very low indeed, and it is doubtful if a great proportion of it realised the cost of packing and transport.

Canning Season.

The main canning season has now begun some fourteen days later than usual. Practically the whole of the canneries' supply of Peaches are drawn from the Murrumbidgee Irrigation Area, from which is expected 3,000 tons of Peaches will be processed this year. As there does not appear to be sufficient canning Peaches to fill the requirements of the Sydney canners who, because of the low prices ruling for their product last year, were able to clear out their stocks to fill an increased public demand, importations from Victoria will probably be necessary. The varieties being canned are mainly Golden Queens and Pullars Clings.

Citrus Prospects.

Murrumbidgee Area has a full crop of Navels and Valencias, probably as large as in 1928. Lemons are light.

Coastal areas have a medium crop of Navels, but common Lemons and Valencias are light. Mandarins in the Hawkesbury and Cumberland centres have set a normal crop. Altogether, the indications are for a normal crop, larger than last year, but below that of that preceding.

"The Fruit World" Appreciated.

"I think your paper an excellent publication for the orchardist, and am advising my friends to take it." —(Signed) F. G. Gill, Torrensville, S.A.

They who bring sunshine to the hearts of others cannot keep it from themselves.—J. M. Barrie.

QUEENSLAND FRUITS.

Bananas and Pineapples of Choice Quality are Being Produced.

Victorian Visitor Appreciative.

SOME INTERESTING DETAILS of the fruit industry in Queensland—particularly as regards Bananas and Pineapples—are supplied by Mr. J. E. White, of the I.F.M. Company, Melbourne, who recently visited Queensland on behalf of his firm.

Mr. White states that Gympie is the finest district in Queensland for Bananas, a very choice quality of fruit being produced. Over 250,000 cases were sent from there last season; in the coming season this quantity is likely to be increased. The Gympie area is not troubled with the bunchy top disease, nor the borer beetle. One of the very interesting places visited was that of Mr. M. Patrick, of the Patrick Plantation, Glastonbury (Gympie district). Here 23 acres are under Bananas, and five more acres are coming on. The place is worked on scientific lines as regards layout and cultural conditions. Choice fruit being produced.

Cooran is another prosperous district, from here 200,000 cases of Bananas were sent to Sydney last season.

Growers are just finishing their last cut; from April onwards growers will cut their new season's crop.

Mr. White believes that the regulations as laid down by the Department of Agriculture, will benefit the industry, even although for the time being some growers are finding the regulations irksome. The regulations provide for sizes of Bananas as follows:—

Choice: 8 in. long, 4¾ in. girth.
Standard: 6½ in. long, 4½ in. girth.
Plain: 5½ in. long, 4 in. girth.

At the present time South Australia will receive Bananas rejected at Melbourne. It is hoped to tighten up the regulations all round to prevent obviously inferior fruit leaving the State. Farseeing growers recognise that if Queensland does not produce the right quality of Bananas, they cannot hope for a continuance

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Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

of the present prohibitive duty against Fiji Bananas.

In some districts Banana growing is run as a sideline by dairymen, and it is understood that it is from plantations not properly looked after that much of the inferior fruit comes from—fruit which is damaging Queensland's reputation.

One of the difficulties confronting the fruit industry of Queensland, is that of the break of gauge and the transfer of the fruit at Wallangarra. This transferring from truck to truck also takes place at Albury at the border between N.S.W. and Victoria.

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The Cavendish is the principal variety of Banana grown commercially. Other varieties are Gros Michel and Lady's Finger.

The Committee of Direction, states Mr. White, is rendering good service to the growers in many ways. It is understood that proposals are pending for a system of control in relation to Bananas, details of which are not yet available.

With regard to Pineapples

two of the principal districts are Amamoor and Dagun, both of these places are rapidly going out of Banana culture and going in for the growing of Pineapples. It is estimated that these districts will cut over 50,000 cases for the fresh fruit market, apart from the fruit for factories.

At Amamoor, Mr. Thomas Smith has a very fine Pineapple plantation. His advice in relation to cultural matters is always esteemed. Other good Pineapple districts are Cleveland and Redland Bay. Factories are paying 5/3 per case for the naked fruit. Pineapples for canning are under a control system operated by the Committee of Direction.

As repard Pineapples on the Melbourne market, a payable price is 11/- per case, prices, however, frequently go much higher. At the end of February the price was 13/- per case, later on as local summer fruits go off the market Pineapples will probably rise to 18/- and 20/- per case for good counts. The Smooth Cayenne is the principal canning variety. For market purposes Queens and Ripleys are used, the first mentioned being by far the more popular.

Paper Mulching.

Pineapple growers are steadily going in for the use of paper mulching between the rows of Pineapples. The idea took some time to get going, although the practice has been firmly established in Hawaii for many years. Paper mulching keeps down the weeds and retains moisture. Growers who have used paper mulching have proved its value, and are using more of it.

Mr. White is of the opinion that the Pineapple business is extending, both for canning and fresh fruit market trade, and the prospects for the industry appear to be very good.

Power Alcohol from Molasses.

Much attention is being paid in Queensland just now to power alcohol, this being obtained from molasses. Already the business has assumed considerable proportions, and it is hoped that the manufacture of power alcohol will not only relieve the present over-production of sugar, but provide an increasingly profitable opportunity for developing Queensland.

The Shell Company is now selling "Shell-Col," this being their ordinary spirit plus 15 per cent. power alcohol.

Mr. White speaks appreciatively of Queensland. He found the people to be most hospitable. Queensland is a very beautiful and fertile State.

Fruit Packing Competition.—The Gerrard Wire-tying Company is presenting four shields to be competed for in the districts of Castlemaine, Pakenham, Croydon and Somerville, by children attending the Government packing classes at the State School. Fruit packing lectures and demonstrations are given by Mr. B. Krone, of the Department of Agriculture.

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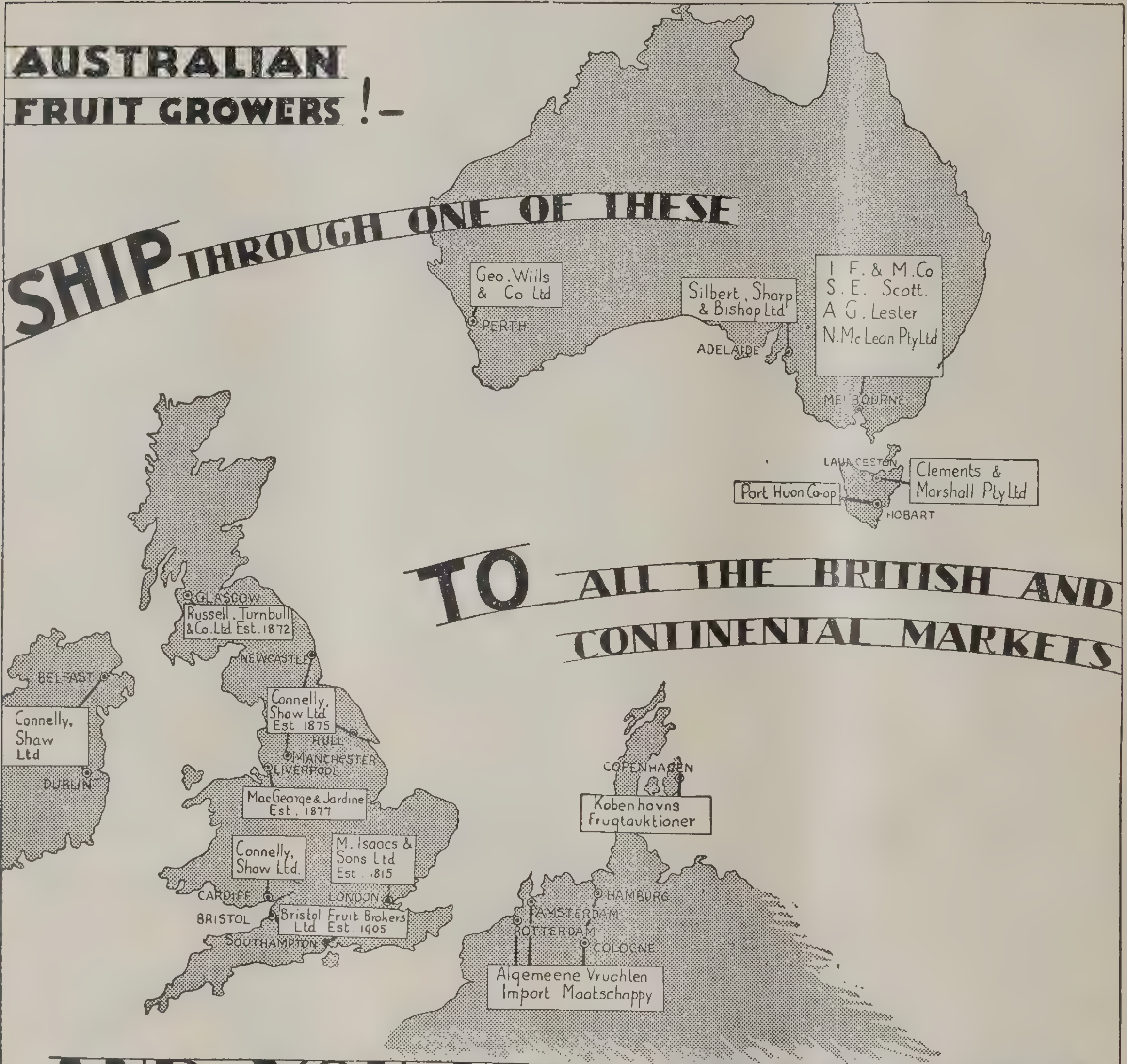
"Customers push my goods for me," said the manufacturer.

"What line are you in, anyway?" asked the hardware jobber.

"Baby carriages," was the reply.

Volck Spray. — A typographical error occurred in our February issue, which we regret. The paragraph in the advertisement should have read: "There is no substitute for Volck."


AUSTRALIAN
FRUIT GROWERS !—
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General Australasian Representative:

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Temple Court, Collins-st., Melbourne.
Tel. F3284. Tel. Add.: "Columbine," Melb.

The "Mixed" Dip for Sultana Grapes.

This is Favored by an Increasing Number of Growers.

(By A. V. Lyon, M.Ag. Sc., Officer in Charge, Commonwealth Research Station, Merbein.)

1. Introduction.

The practice in Australia, in respect to drying Sultana Grapes, is to dip the Grapes in a chemical solution, and to "air-dry" them on shaded racks. The various "dips" in use, and the methods of processing, have been described in a previous publication (Standard Methods of Drying Sultana Grapes in Australia, Council for Scientific and Industrial Research, Australia, Pamphlet No. 6, 1928).

The three methods described in this publication are now in general use; and, in addition, a fourth dip, known as the "mixed dip," is being used by an increasing number of growers.

The "mixed dip," which has previously been investigated, was excluded from Pamphlet No. 6, at the request of the industry, partly to reduce the number of Sultana types being produced, and partly because saponification, resulting from the heating of carbonate of potash and olive oil, was considered undesirable. Subsequent experience has proved that the very slight saponification resulting at controlled temperatures has not affected quality or realisation; and that the dip is favored by a number of producers, since the light color typical of cold dip samples, can be approximated without the disadvantage of the long period of immersion necessary in the cold solution.

The preparation of a "mixed dip," and the precautions in its use are accordingly described herein. Excepting a few growers, the use of the mixed dip has been limited to the 1929 processing season, which was a particularly favorable one. With the inevitable recurrence of a bad drying season, and more extended experiments and experience, some modification of the present recommendations will probably prove necessary.

2. The Mixed Dip.

1. General.

Essentially, the mixed dip is a modified temperature caustic dip, to which the substances employed in the cold dip (potassium carbonate and olive oil) have been added. The common types of dip tank, as employed for the caustic dips, prove suitable.

The purpose of a "dip" for Grapes is to remove the waxy "bloom" of the Grape, and to hasten drying. The caustic dips in addition to this, facilitate drying by "cracking" the skin of the Grape.

The results obtained in "dipping" Grapes are controlled chiefly by the following four factors:—

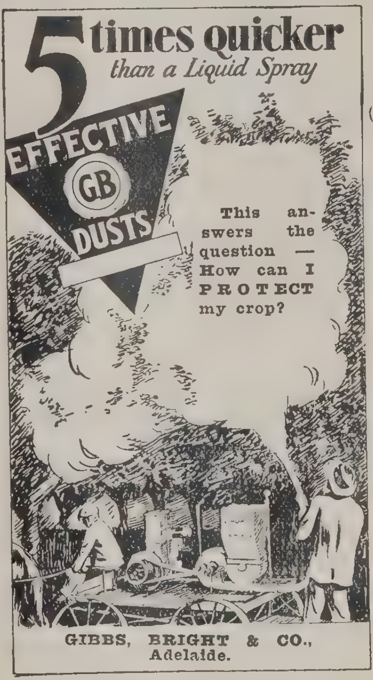
1. The condition of the fresh fruit.
2. The temperature of the dip.
3. The concentration of the solution.
4. The period of immersion in the dip.

In practice, only two of these four variables may be kept constant during the season's operations. The condition of the fresh fruit varies according to soil, cultural practice, season, and degree of maturity. It has been proved possible to keep the immersion period constant within practical limits. This leaves strength and temperature at the will of the operator. Either one, or both, must vary to meet the inevitable variation in the condition of the fresh fruit.

Decided variations in temperature are not recommended in any dip containing caustic soda, as the browning decreases markedly with temperature. With a standard concentration suitable to certain classes of Sultana Grapes at 180 deg. F., reduction to 130 deg. F. has been found necessary to avoid over-cracking on early season's Sultanas, and those of low density.

Such low temperatures are undesirable, since the browning action of the caustic soda becomes negligible, and in adidtion, except in very favorable drying weather, other faults arise, such as increased variation of the effect of the dip on the different class of Grapes; liability to moulds, and a decrease in the drying rate accompanied by a preponderance of dark berries. For these reasons, it is preferable to maintain the temperature within narrow limits, and to adjust caustic soda concentration to suit the different classes of Grape. This policy is accordingly recommended, though it is recognised that, under certain conditions, adjustment

DUSTING



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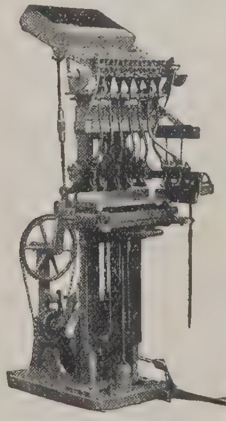

SOLE AGENTS,
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of temperature may also meet the case.

a. The temperature.

Over a comparatively wide range of temperatures (212 deg. F. down to 175 deg. F.), the resultant color of the dried product is proportionally lighter as the temperature of the dip is decreased.

In comparison with the caustic dip, effective and uniform dipping in a mixed dip results at temperatures approximately 10-15 deg. lower; and in addition, a slighter wider range of temperature is allowable before differences become apparent. A standard of 180 deg. F., with a 4 deg. variation on either side, gives good results. It is necessary to ensure, by withdrawing fires, or adding cold solution, that the dip does not rise in temperature when not in use, as the higher temperatures give a permanent increase in saponification.

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H. JONES & CO. LTD.,
HOBART

b. Concentration.

At 180 deg. F., a 5 per cent. carbonate solution (2½ lb. in 50 gals.) is satisfactory with a considerable marginal range. Little difference in the appearance of the fruit is noted if twice this concentration is employed. Higher concentrations, however, are not recommended on account of increased saponification. The concentration in respect to caustic soda should vary according to the condition of the fruit (fresh). The practical guide is the disappearance of the bloom, and the appearance of small cracks on a proportion of the berries. A .3 per cent. solution of caustic soda (1½ lbs. to 50 gals.) represents the minimum concentration. If this concentration does not result in slight cracking, it should be increased by small additions (¼ lb. to 50 gals.), until the cracking is noted.

Approximately 1½ pints of olive oil emulsified in each 50 gals. of the potassium carbonate solution completes the ingredients for a mixed dip.

c. **Period of Immersion.**

A quick dip (1½ to 2 secs.) gives best results. Adjustment of a faulty dip by altering the period of immersion instead of altering the concentration, is not recommended.

d. Method of Preparation (for a 50 gal. dip.).

Prepare a .5 per cent. solution by dissolving 2½ lbs. of potassium carbonate in 50 gals. of water in the dip tank; add 1½ pints of olive oil, and 1½ lbs. of caustic soda. Heat to a temperature of 180 deg. F., and test by dipping a tin of Sultanas. If small cracks are not showing, make small additions of caustic soda (¼ lb. at a time) until the cracks appear. The dip is then ready for use. All subsequent additions to the volume of the dip should be made by adding a 5 per cent. solution of potassium carbonate (½ lb. to 10 gals.), in which the required proportion of olive oil has been emulsified. Necessary corrections in the concentration of the caustic soda may be made as before, by ¼ lb. additions direct to the dip.

e. Treatment of Sultanas after Dipping.

The precautions necessary in handling fruit after dipping have been fully discussed in a previous publication. (Standard Methods of Drying Sultana Grapes in Australia, Pamphlet No. 6, C.S.I.R.)

A thin spreading immediately after draining is the first essential. If spraying on the rack is necessary, the cold dip spray should be employed (25 lbs. potassium carbonate and 1½ pints of olive oil to 50 gals. water). The inclusion of caustic soda in the spray adds to the expense without any compensating advantages. Removal from the rack only when comparatively dry, and further drying by exposure to the sun on hessians until green tinge, if any, is removed, are necessary steps in securing quality. A wash, subsequent to drying on hessians, is usually of advantage. This restores the correct moisture content, which is often lost while bleaching is in progress. The light straw color, held by the fruit on removal from the rack after limited sun exposure, is considered inferior to the more intensive golden color, secured by washing and further exposure. The cold dip wash (2½ lbs. pot. carbonate and 1½ pints olive oil to 50 gals. water), gives a very satisfactory "finish" to dried Grapes.

MARGETSON
& CO. LTD.

Fruit Importers &
Salesmen

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COVENT GARDEN
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Summary.

Preparation and use of mixed dips:—

1. Add 2½ lbs. potassium carbonate, and 1½ pints of olive oil for every 50 gals. water in the dip tank (or proportionate quantities).

2. Add 1½ lbs. of caustic soda (per 50 gals.).
3. Heat to a temperature of 180 deg. F., and test by dipping Sultanas. Add additional caustic soda (¼ lb. at a time), until slight cracks appear on the berries. The dip is then ready for use at 176 deg. F. to 184 deg. F. The dip should not be heated to higher temperatures when not in use.
4. Make all necessary additions to the volume of the dip by adding a solution prepared as in 1, above. (A reserve prepared in a separate tank is found useful.)
5. The appearance of the fruit should at all time be taken as the guide to the concentration of the caustic soda. If over-cracking, decrease concentration by adding solution as in 4, above. If under-cracking, add caustic soda (¼ lb. additions to 50 gals.), until cracks are in evidence.
6. Spread thinly on the rack as soon as possible after draining.
7. Avoid over-filling dip tins. This damages fruit during cartage and stacking.
8. Spray with the cold dip solution (equivalent to 25 lbs. potassium carbonate, 1½ pints of olive oil to 50 gals. water) if drying rate is not satisfactory, or wet weather occurs.
9. Remove from the rack when thoroughly rack-dried in the mornings, and expose to the sun on hessians as soon as possible.
10. Exposure to the sun should be continued until all traces of green tinge have disappeared.
11. If over-dried at this stage, wash in a solution of 5 lbs. potassium carbonate and 1½ pinnts of olive oil to 50 gals. water, and re-dry until a satisfactory moisture content results. (Usually one day's exposure.)

HOMECRAFT DEMONSTRATOR DESIRED.

Increased Use of Fruits.

At the Conference of the N.S.W. Agricultural Bureau (Southern Districts), held at Albury on February 26, the resolution was carried, requesting the Department of Agriculture to provide a lady instructor to lecture and demonstrate jam-making, cooking, dried fruits, etc.

THE DRIED FRUITS INDUSTRY.

A.D.F.A. Prepares Stabilisation Proposals.

THE Board of Directors of the Australian Dried Fruits Association after patient consideration has prepared some proposals for the stabilisation of the industry. In the statement the Board sets forth the importance of the industry, there being some 35,000 people settled on the banks of the Murray engaged directly and indirectly in the production of dried fruits.

The 1929 crop was valued at £3,000,000, the bulk of which had to be exported. The increase in production was caused through the action of the Government in settling 2,000 returned soldiers on dried fruit blocks. The industry pays Federal arbitration awards, 60 per cent. of the cost is represented by labor.

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White Oil Emulsion
For Codlin Moth and Red Scale
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Parsons & Jaques
Manufacturing Chemists,
6 Patterson St., 155 Yarra St.,
Abbotsford, Vic.
Tasmanian Agents—
N. L. Hopkins, Hobart

The main problem confronting growers is the uncertainty of export returns meeting the cost of producing and marketing the fruits. The idea in the stabilisation proposals is that growers might have some measure of security regarding the costs of production, even if no profit could be shown for a period.

Equalisation Fund Proposed.

The principle evolved in the equalisation fund is the offsetting of gains over cost of production over one season against losses which might occur in other seasons, combined with an assurance of basic production costs; costs of production to be computed according to yield, the minimum basis to be one ton per acre; all growers and packers to be registered, the packers to pay to the growers the cost of production as decided and any balance left over into the equalisation fund; growers' accounts in the equalisation fund to be kept separate; negotiable certificates to be issued to growers who have surpluses. Such certificates to be liable to recourse in case of subsequent defects. The duration of the fund to be for three years.

Continuing, the statement sets out the cost of production per acre, and the returns to the grower on varying yields from one to two tons. Costs of production and harvesting were shown at £32/2/- on the basis of one ton per acre, or £51/13/- at two tons per acre. The average yields over the Mildura, Merbein and Red Cliffs areas (which comprise nearly two-thirds of the total area in Australia) for the five years 1925-1929 are:—Currants, 28.1 cwts. per acre; Sultanas, 24.7; Lexias, 30. The average nett prices realised by growers for each fruit during 1925-1928 (1929 is not finalised) were: Currants £29/5/- per ton; Sultanas, £42; Lexias, £25/10/-.

Under the A.D.F.A. scheme there would be no undue call on the Government funds for stabilisation. The main factor would be the equalisation of annual returns and the assurance of annual costs. Growers could pay interest on sinking funds to State Government, and to mortgagees, and would have continuity of tenure.

If the stabilisation principle could be established for Sultanas and Currants, a scheme could be evolved for the more difficult Lexia.

Figures are quoted showing the world production for 1928 at 325,600 tons, and the world consumption for the same period at 356,700 tons. The world production for 1929 was set down at 300,000 tons. A hopeful view was taken regarding gradual stabilisation of world prices.

Concluding the statement, the Chairman of the A.D.F.A. Board (Mr. H. D. Howie), says: "The prosperity of the industry is greatly dependent on continuance of our trade treaty with Canada, and preference in the United Kingdom. We respectfully request that every effort be made to retain these arrangements and to extend tariff preference to New Zealand."

* * *

The whole matter is receiving the attention of the Federal Government, and a favorable reception is anticipated.

N.S.W. DRIED FRUITS BOARD.

At the conclusion of the General Interstate Conference of Dried Fruits Boards held in Sydney in February, a meeting of the N.S.W. Dried Fruits Board was held.

This was the first meeting of the newly elected members of that Board, Mr. E. J. Hudson, representing the growers on the Murrumbidgee irrigation areas, and Mr. R. A. C. Freeman, representing the growers within the rest of the State.

Export Quotas.—It was decided to recommend to the Minister for Agriculture that the following export quotas be determined for intrastate trade for the season 1930:—Sultanas 55 per cent., Currants 55 per cent., Lexias in uniformity with that declared by the other producing States.

Scott & Edwards

S. E. Scott, late Manager,
Fruit Dept., Denny's Lascelles
Ltd., Melbourne.

Shipments to United Kingdom
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Personal Supervision of
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Telephone: F 4970.

In connection with interstate trade, representations are to be made to the Minister for Markets that, if possible, action be taken under the Commonwealth Dried Fruits Act 1928, which, notwithstanding the quotas decided upon by the Board for intrastate trade, will enable the N.S.W. growers to have the benefit of the interstate markets.

Reduction of Levies.—It was decided to reduce the levies on growers from 1-16d. per lb. to 1-/32d. per lb.

Mr. W. M. Nulty, retiring member, addressed the new members in relation to the workings of the late Board, his action being much appreciated.

Registration was granted to a number of packing sheds.

South Australian Fruit Marketing Association.

THE MONTHLY MEETING of the South Australian Fruit Marketing Association was held at the Secretary's office, Brookman Buildings, Grenfell-street, Adelaide, on Monday, February 3, 1930, the President, Mr. H. J. Bishop, being in the chair.

Incorporation. — The question of incorporating the Association was discussed, and the matter was deferred till the next meeting to enable further information to be obtained in regard to the matter.

Fruit Inspection at Port Adelaide and Outer Harbor.

A letter was received from Mr. G. Quinn, Chief Horticultural Instructor, in reply to the Association's request for additional Inspectors for fruit for export at Port Adelaide and Outer Harbor. Mr. Quinn pointed out the difficulties in the way of obtaining additional inspectors, and suggested that the Association could assist considerably by having the fruit of members brought to the appointed places for inspection at least one day ahead of the latest time for taking it aboard ship, and by having the various lines stacked in such order, and in such positions in the inspection sheds, as would facilitate the scrutiny by the inspecting officers.

It was decided that while every endeavor would be made to carry out this request, the very large export (700,000 cases) would make it very difficult for only two inspectors to satisfactorily cope with the work, and a small sub-committee was appointed to interview Mr. Quinn further in regard to this matter, and also on several other points of importance regarding the coming season's export.

Shipping Committee.

This Committee reported that several meetings had been held with the Committee of the Overseas Shipping Representatives' Association in an endeavor to finalise the freight position, but this was still unsatisfactory, particularly as regards freight for Hamburg.

Pears.

The Pear Committee advised that a chamber will be available for a boat sailing on March 10, but at the present time it seems doubtful if sufficient fruit to fill this chamber will be available on that date. The Pear Committee will meet again to further consider the position on Wednesday, February 12, 1930.

Visit of Mr. B. Krone, Victorian Fruit Packing Expert.

It was resolved that a letter of thanks be sent to Mr. Krone for the excellent demonstrations given by him during his visit to Adelaide in January, and also to the Minister of Agriculture for his efforts in obtaining the services of Mr. Krone, and to the Victorian Agricultural Department. Between 400 and 500 persons attended the demonstrations, and it was considered that the visit will produce excellent results in connection with the coming season's pack.

Hay Stack Covers
for covering hay stacks, etc., onions, wheat, wool, lucerne, etc., also as a tarpaulin.

Price: 3-Star.

12 x 20	£2	3	0
12 x 24	2	13	6
12 x 30	3	8	6
18 x 20	3	8	6
18 x 24	4	2	6
18 x 27	4	12	6
18 x 30	5	2	0
21 x 30	5	17	6
21 x 33	6	7	0
22 x 24	5	7	0

Price: 4-Star.

12 x 20	£3	1	6
12 x 24	3	15	0
12 x 30	4	11	0
18 x 20	4	11	0
18 x 24	5	9	0
18 x 27	6	3	0
18 x 30	6	15	0
21 x 30	7	17	6
21 x 33	8	12	6
22 x 24	6	14	6

Size 22 x 24, waggon size only, includes ropes; other sizes, ropes 3/6 extra.

Special Sizes Made to Order.
Also duck tarpaulins, verandah blinds, car covers, window blinds and all canvas goods. Please write for full list.

The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine St., Geelong, Vic.
Secondhand Sacks For Sale.
Manufactures of all Descriptions of Canvas Goods.

Gerrard Wire Company.

Advise was received that this company would make available, free of cost, the services of a packing expert, who would tour the country districts during the month of March. A programme would be drafted by the Association's Committee, in conjunction with the representative of the Gerrard Company to enable the expert's services to be utilised to the best advantage.

The next monthly meeting will be held on Monday, March 3, 1930.

"To Choose the Best is Wisdom"

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to obtain the highest Prices for your fruit, on every market which offers?

With "Lightning" Equipment in your Packing House, you can compete successfully with all comers

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GRAND AUSTRALASIAN FRUIT EXHIBITION.

Hobart, May 7, 1930.

THE prize schedule of the Grand Australasian Fruit Show, to be held at Hobart on May 7, 8, and 9 next, is to hand. The Australian Conference of Fruitgrowers is holding its 1930 session in connection with this Exhibition.

£1,100 is to be offered in cash prizes and trophies.

In the trophy section there are prizes for fresh fruit and fruit products, tropical fruits, citrus fruit, fruit preserves, dried fruits and vegetables, farm and dairy products, Australasian wines.

There are case, tray and plate sections for Apples, Pears and Citrus fruits.

Among the tropical fruits there are sections for Bananas, Pineapples, Granadillas, Papaws, and Custard Apples. There is a miscellaneous fruit section, and a farm section.

Competitions include the grading and packing of Apples, and the best arranged Hobart shop and window display of fruit during week of exhibition.

Entries close Tuesday, April 22, and should be addressed to Mr. A. J. Honey, Secretary, Australasian Fruit Exhibition, Bursary House, 26 Elizabeth-street, Hobart, Tasmania.

-LEMONS-

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73 Whiteman St., South Melbourne, Vic.

MILDURA CO-OPERATIVE FRUIT COMPANY.

Successful Year's Operations.

Dividend of 7 Per Cent. Declared.

AT the 25th annual meeting of shareholders of the Mildura Co-operative Fruit Company held at Mildura on February 22, Mr. A. L. Johnstone, Chairman of Directors, presiding. The balance-sheet showed a satisfactory trading and a dividend of 7 per cent. was declared.

New South Wales Quota.—A resolution was carried regretting the quota fixed by the N.S.W. Board for home consumption and pledging loyal support to the A.D.F.A. in any further negotiations deemed necessary.

Mr. Johnstone said the Board would first approach the Commonwealth Government and would consider any further action necessary.

The New 1930 Model

Guider Fruit Grader

Complete with Automatic Feed Belt. **Price £25.**

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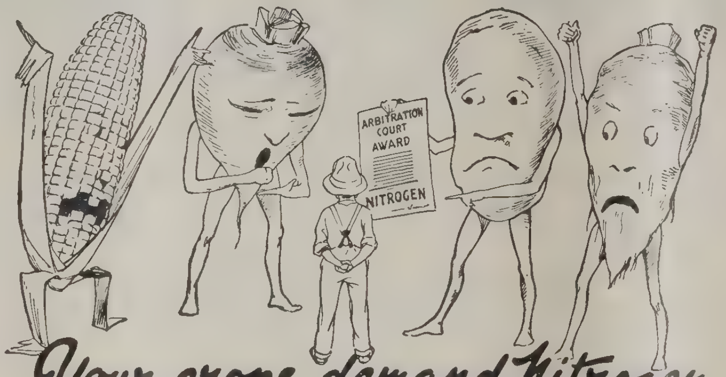

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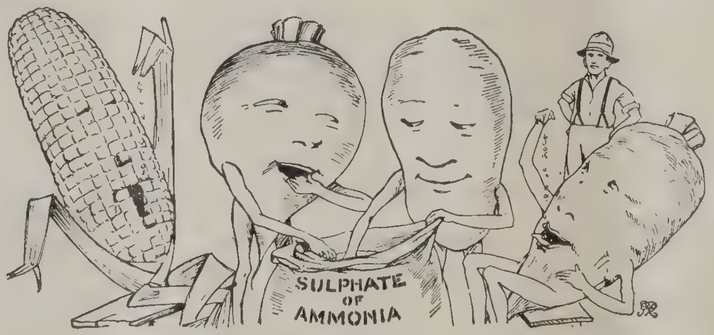
TRY to imagine the petulant potato, the mutinous maize, the hostile horse-radish, and the truculent turnip acquainting their harassed employer of the latest Arbitration Court Award of Nitrogen. In the role of employer how would you act?

You'd give them Nitrogen in its cheapest and best form, quickly available, and of such a character that it would readily mix with superphosphate and potash to make a complete fertiliser, or be capable of use alone as a top-dressing at seasonable periods. Briefly, you'd give them **SULPHATE OF AMMONIA,** Australia's premier Nitrogenous Fertiliser.



Literature from

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE
360 Collins Street, Melbourne.

CANNED FRUIT INDUSTRY.

From information furnished to the Canned Fruit Control Board by canners, it has been ascertained that the stocks in Australia of canned Apricots, Peaches and Pears carried over into the 1930 season were as follow:—

	16 oz. doz. tins.	21 oz. doz. tins.	30 oz. doz. tins.	Miscellaneous. doz. tins.
Apricots	5,123	245	115,574	10
Peaches, halves	12,011	—	105,914	65
„ sliced	4,755	—	15,099	8
Pears	24,178	—	128,062	7
Totals	46,067	245	364,649	90

Consumption Within Australia.—It is estimated that the consumption of canned Apricots, Peaches and Pears in Australia during the year 1929 was 2,020,260 dozen 30 oz. tins, or approximately four tins per capita; this figure has been arrived at as under:—

	Apricots.	Peaches.	Pears.	Total.
	(In doz. 30 oz. tins, or its equivalent.)			
Carry-over stocks as at 31/12/28	144,381	799,143	118,465	1,061,989
Quantity processed, 1929 season	474,960	1,325,855	572,148	2,372,963
Quantity available in 1929	619,341	2,124,998	690,613	3,434,952
Less exports during 1929	243,157	615,434	167,976	1,026,567
Less carry-over stocks as at 31/12/29	118,337	129,616	140,172	388,125
Estimated consumption in Australia during 1929	257,847	1,379,948	382,465	2,020,260

DRIED FRUITS.

Sales in Great Britain.

According to advices received from the Commonwealth Dried Fruits Export Control Board, 301 tons of Australian dried fruits were sold in Great Britain for the week ending February 13, having a value of £10,800.

Details of the sales include 189 tons Sultanas, at an average of £35/16/-, and 112 tons Currants averaging £36/16/8 per ton.

The quantity of Australian dried fruits in Great Britain and afloat not yet placed, amounts to 14,783 tons, including 13,835 tons Sultanas, 705 tons Currants, and 243 tons Lexias.

Sales for the 42 weeks of the season to date total 35,159 tons out of a quantity of approximately 50,000 tons shipped to Great Britain this season.

Advices from London indicate that the market continues quiet with an absence of demand for anything but low-priced fruit.

The Clyde Simplex Driers
For Drying
Fruit Vegetables and other Products
NO MORE WASTE FRUIT OR VEGETABLES
Simple - Self Contained
Made in Sizes to Suit
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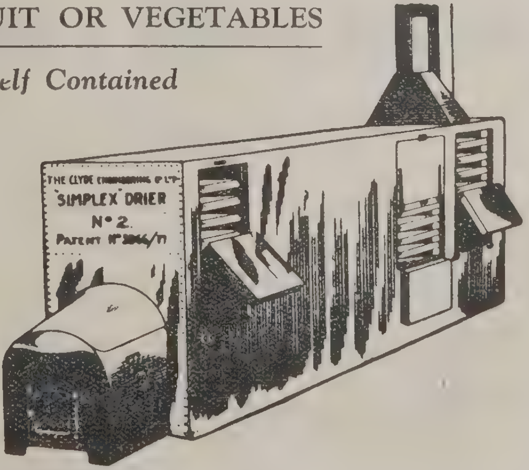
GRANVILLE, N.S.W.



COOPER PRODUCTS

I UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

N.S.W.—
William Cooper & Nephews (Australia) Limited, Sydney, and Agents.

Victoria—
Cooper Engineering Co. Ltd., Melbourne.

Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

EXPORT APPLE PRIZES.

The "Orient" Competition.

Open to Growers Throughout the Commonwealth.

SPECIAL PRIZES for export Apples are being provided in the schedule of the Royal Agricultural Show, Melbourne. Growers are eligible to compete for substantial prizes, and a handsome silver cup donated by the Orient Steam Navigation Company Ltd.

Apples for Export (in case). Four cases, two each of two distinct varieties suitable for export.

(a) One case of each variety (two cases in all) to be staged and judged at the Royal Agricultural Show, Melbourne, September 18 to 27 next. The other two cases to be forwarded to London and judged there. Points for both judgings, in Melbourne and London, to be added, and the prizes awarded to the exhibitors obtaining the highest aggregate points.

First prize £15, second prize £7, third prize £3. The "Orient Jubilee" cup, donated by the Orient Company to commemorate the competition initiated to celebrate their jubilee year—1928, will be given to the winner of the above class. Entry fee—Members and non-members, 5/- each entry.

HENRY SCHWIEGER,
Manager.

Temple Court, 422 Collins-street,
Melbourne.

Note Carefully.—Entries (by letter) close on Tuesday, April 22, and two cases of Apples (one of each variety) must reach the Government Cool Stores that day.

NEW ZEALAND APPLE EXPORTS.

It is estimated by Mr. H. E. Napier, manager of the New Zealand Fruitgrowers' Federation, that there will be 1¼ million cases of Apples shipped from New Zealand overseas during the forthcoming year, but it is impossible to give any reliable figures at the moment as to the respective quantities for England, the Continent or South America. These will be according to variety and size, the latter being governed largely by weather conditions.

COLOMBIE COMPETITIONS.

TWO IMPORTANT COMPETITIONS are being conducted during 1930 by Mr. H. G. Colombie, who is the representative in Australia for several leading fruit brokers in Great Britain and Europe.

The grand championship of Australiasia will be decided at the Australasian Fruit Exhibition at Hobart in May. The prize is for the best three exhibits from any part of Australia and New Zealand consisting of five cases of Apples, one each of different commercial varieties and sizes, ready packed for export. The scale of points is as follows:—

Labelling or stencilling 10, timber, nailing, and general external appearance 15, wrappers 10, correct height, alignment, compactness, wrapping 20, uniformity of size 10, quality and freedom from disease 20, uniformity of color 15. Total 100.

First prize (donated by H. G. Colombie), trophy, value 40 guineas—which will become the property of the winner—and cash prize of 20 guineas, and grand championship ribbon and certificate. Second prize (donated by the Port Huon Fruit Growers' Co-operative Association Ltd. Hobart). Cash prize of 15

Canadian Standard Cases

C. H. TUTTON Pty. Ltd.

ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

Telephone: F 3148 (3 lines). Telegraphic Address: "TUTBOX."

Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

guineas and grand ribbon and certificate. Third prize (donated by Messrs. Stokes & Hammond Pty. Ltd., fruit importers and exporters, Hobart); cash prize of 10 guineas and ribbon and certificate.

VICTORIAN APPLE EXPORT COMPETITION.

The Colombie Cup now held by Mr. R. E. Fowler, Pomonal, will be competed for during the 1930 export season. The judging will be done by Mr. J. M. Ward, Superintendent of Horticulture. The competition will be judged on the points system, details of which are included in a pamphlet available free on application.

Prizes:—1, The challenge cup, to be held for 12 months by the grower having secured the highest average of points during the shipping season. 2, A replica of the cup, to become the property of the yearly winner.

The large competition cup will become the property of the grower, who wins the competition three times, not necessarily consecutively. There is no entrance fee. All who ship fruit are eligible to enter. Points are awarded progressively during the export season.

Destruxol.—"Destruxol" is an appreciated spray mixture for various orchard pests, sucking and chewing insects. Mr. Thos. Pockett, the world-famous Chrysanthemum grower, states he has used "Destruxol" with great success. The distributors for Victoria are the Ormond Plant Farm Pty. Ltd., Ormond, S.E.9. For the Bendigo district and that area bounded by Bendigo, Echuca, Swan Hill and Charlton, the agents are the Northern Seed Supply Co., Hargreaves-street, Bendigo.

Happiness grows at our own fireside and is not to be picked up in strangers' gardens.—Douglas Jerrold.

You traverse the world in search of happiness, which is within the reach of every man; a contented mind confers it on all.—Horace.

Fruitgrowers!
HERE'S your CHANCE to
Lend A HAND to the
Mitcham Diggers'
SHOW
At MITCHAM, VICTORIA,
Sat. Afternoon and Evening,
5th APRIL.

FRUIT (24 Sections),
FLOWERS, VEGETABLES,
And HOMECRAFT.
SCHEDULES now obtainable
from Hon. Sec.,
E. V. PANELLI,
Doncaster East Road, Mitcham.
President, CHAS. WALLACE,
Burwood Road, Vermont.
Support already promised by
some of the best growers of the
Eastern District.
BE WITH THEM

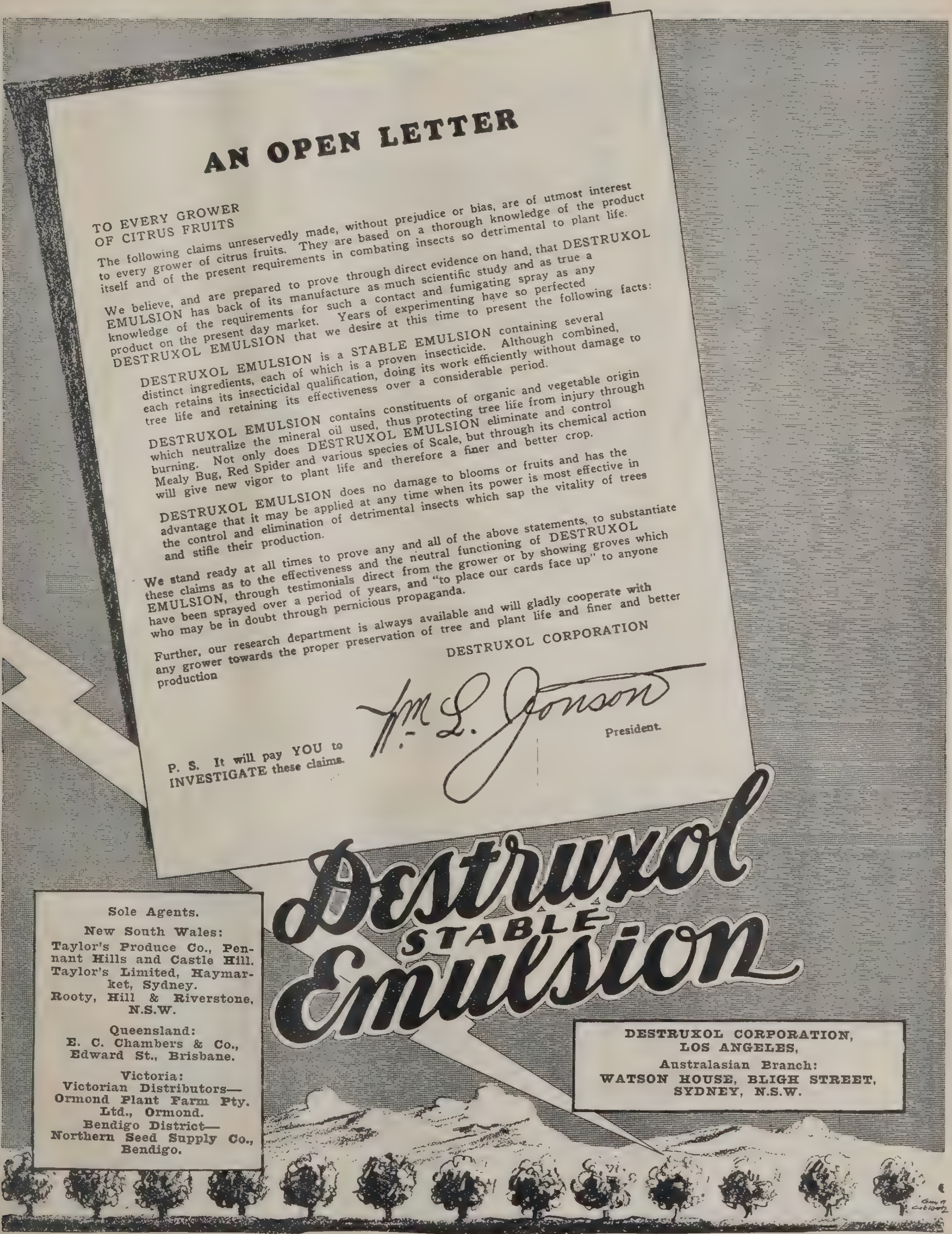
"HARVEY"
Tunnel Dehydrator

The
Latest Idea
in
DRYING
FRUIT
VEGETABLES
and
Other Products

WRITE FOR PARTICULARS TO

D. HARVEY
ORCHARD & VINEYARD IMPLEMENT SPECIALIST.
FRUIT GRADERS & DEHYDRATORS.
POWER LIFT, TRACTOR, FARM & ORCHARD IMPLEMENTS.
BOX HILL, E.11. - - VICTORIA
AGENTS ALL STATES

D. HARVEY
BOX HILL MELB.
DEHYDRATOR



AN OPEN LETTER

TO EVERY GROWER
OF CITRUS FRUITS

The following claims unreservedly made, without prejudice or bias, are of utmost interest to every grower of citrus fruits. They are based on a thorough knowledge of the product itself and of the present requirements in combating insects so detrimental to plant life.

We believe, and are prepared to prove through direct evidence on hand, that DESTRUXOL EMULSION has back of its manufacture as much scientific study and as true a knowledge of the requirements for such a contact and fumigating spray as any product on the present day market. Years of experimenting have so perfected DESTRUXOL EMULSION that we desire at this time to present the following facts:

DESTRUXOL EMULSION is a STABLE EMULSION containing several distinct ingredients, each of which is a proven insecticide. Although combined, each retains its insecticidal qualification, doing its work efficiently without damage to tree life and retaining its effectiveness over a considerable period.

DESTRUXOL EMULSION contains constituents of organic and vegetable origin which neutralize the mineral oil used, thus protecting tree life from injury through burning. Not only does DESTRUXOL EMULSION eliminate and control Mealy Bug, Red Spider and various species of Scale, but through its chemical action will give new vigor to plant life and therefore a finer and better crop.

DESTRUXOL EMULSION does no damage to blooms or fruits and has the advantage that it may be applied at any time when its power is most effective in the control and elimination of detrimental insects which sap the vitality of trees and stifle their production.

We stand ready at all times to prove any and all of the above statements, to substantiate these claims as to the effectiveness and the neutral functioning of DESTRUXOL EMULSION, through testimonials direct from the grower or by showing groves which have been sprayed over a period of years, and "to place our cards face up" to anyone who may be in doubt through pernicious propaganda.

Further, our research department is always available and will gladly cooperate with any grower towards the proper preservation of tree and plant life and finer and better production

DESTRUXOL CORPORATION

Wm. L. Jonson
President.

P. S. It will pay YOU to INVESTIGATE these claims.

Destruxol STABLE Emulsion

Sole Agents.

New South Wales:
Taylor's Produce Co., Pennant Hills and Castle Hill.
Taylor's Limited, Haymarket, Sydney.
Rooty, Hill & Riverstone, N.S.W.

Queensland:
E. C. Chambers & Co., Edward St., Brisbane.

Victoria:
Victorian Distributors—Ormond Plant Farm Pty. Ltd., Ormond.
Bendigo District—Northern Seed Supply Co., Bendigo.

DESTRUXOL CORPORATION,
LOS ANGELES,
Australasian Branch:
WATSON HOUSE, BLIGH STREET,
SYDNEY, N.S.W.

South Australian Distributors:—OVERSEAS EXPORT CO., 25 King William St., Adelaide.
Tasmanian Distributors:—FERGUSON & CO. PTY. LTD., 10 Murray St., Hobart.
Agents Wanted:—WRITE FACTORY REPRESENTATIVE, Watson House, Bligh St., Sydney.

Spraying Test at Kyabram

proves that

There is no substitute for

VOLCK

In the official report of the Red Scale Spraying Test conducted at Kyabram last March, two oils only out of the five tested showed no sign of leaf drop or injury.

Three months later a further examination was made by the entomologist. On this occasion Volck sprayed trees showed only 5 per cent. live scale, this being the most satisfactory result.

Volck is an extremely efficient spray at the time of spraying, and in addition its action continues for a considerable period afterwards.

There is no substitute for VOLCK

We shall be happy to forward a copy of the official report of the above test on request, together with details of the most efficient methods of using Volck.

Victorian Agents: H. C. PANNIFEX & CO., 26 Market Street, Melbourne.

New South Wales Agents: THE AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Sydney.

Queensland Agents: The AUSTRALIAN FRUIT & PRODUCE CO., Fruit Exchange, Brisbane.

Tasmanian Agents: W. H. IKIN & SON, Hobart.

South Australian Agents: SILBERT, SHARP & BISHOP, Rundle Street, Adelaide.

West Australian Agents: PATERSON & CO., Perth.

Green Manuring.

Sow Now for Cover Crops.

Valuable for Orchards, Citrus Groves and Vineyards.

The value of green manuring for adding nitrogen and improving the texture of the soil, was emphasised by Prof. Prescott, of the Waite Research Institute, in his appreciated lecture at the Citrus Convention at Mildura.

Mr. S. A. Cock, Victorian Government Citriculturist, gives some valued hints, as follows:—

Sowing the Crop.—It is not advisable to sow the whole of the grove.

Taking it for granted that a green cover crop is necessary every second year, a good practice is to sow every other land in the grove each year. This yearly practice will ensure a green cover crop over the whole grove once every two years. It also permits the harvesting of the crop and the carrying out of any spraying or cultivation practice which may become necessary during the winter without unduly tramping down the sown portions of the grove.

The land should be prepared for sowing by irrigation and cultivation, and the crop should be sown not later than April.

Experiments in green manure crops were carried out at the Burnley School of Horticulture some three years ago as follows:—

Field peas (2 bus. to acre), green weight, 19 tons 7 cwt. per acre; moisture per 10 lbs., 88.85; dry per 100 lbs., 11.15. Melilotus indica (20 lbs. to acre), green weight per acre, 12 tons 4 cwts.; moisture per 10 lbs., 79.76; dry per 100 lbs., 20.24; Golden Tares (1¾ bus. to acre), green weight per acre, 16 tons 4 cwts.; moisture per 10 lbs., 82.66; dry per 100 lbs., 17.34. Skinless barley (1¾ bus. to acre), green weight per acre, 8 tons 6 cwt.; moisture per 10 lbs., 79.03; dry per 100 lbs., 20.97.

From the foregoing growers will observe the bulk of the crop along with its moisture content, and be able to estimate the amount of dry matter returned to the soil. Since 1923 Melilotus indica has been tried in some of the northern irrigation areas, but the strike has not been satisfactory. It requires to be sown not later than May, and requires a fairly firm seed bed.

Probably growers will find the following mixture suitable for the purpose of a green crop:—Skinless barley, ¾ bushel per acre; Field Peas, 1 bushel per acre; Golden Tares, ¼ bushel per acre. When sowing, the addition of 1½ to 2 bushels of superphosphate per acre are necessary to stimulate the growth of the crop.

RAISIN PIES.

Mr. Eldridge, one of the publicity and sales staff of the Australian Dried Fruits Association, called at the "Fruit World" Office at the end of February. Mr. Eldridge spoke of the increased sales of dried fruits through the "Raisin Pie" campaign. Ideas for improved Raisin pie recipes would be welcomed.

* * *

We would like to see the American style of fruit pies introduced into Australia.

At the forthcoming Fruit and Flower Show in the Melbourne Town Hall on April 28 and 29, we will arrange for this style of fruit pie to be shown.

The Editor acknowledged with thanks the receipt of a handsome calendar for 1930 from Messrs. Comino Bros. Ltd., fruit and produce merchants, Brisbane, Queensland.

Timm & Gerstenkorn
Fruit Auctioneers and Brokers
Fruchthof . HAMBURG . Germany

Established
1865

Tel.-Addr.:
„Timmkorn
Hamburg"

Special Catalogues showing prices issued after each sale

Account sales and cheques sent promptly after sale if desired cable remittance

Phone :
F 4869

Vic. Rep. **Consignments solicited** ✱ **Advances if desired**
BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.
Tasmanian Rep. **H. JONES & CO. LTD., Old Wharf, Hobart**

SOMERVILLE SHOW

Wednesday, 12th March 1930

Victoria's Greatest Fruit Show

HORSES. CATTLE, POULTRY, FANCY-WORK, COOKERY, VEGETABLES, DOGS, MOTOR EVENTS, Etc., Etc.,

Special Train leaves Melbourne, 11.48 a.m. Ordinary train, 9.20 a.m., arriving 10.45 a.m. Show to be opened 1.15 p.m. by Mr. Slater (Minister of Agriculture)

Perfect motor road.

Ideal Days' Outing.

Schedule free. Apply
T. J. PEARCE, Somerville.
Phone 18.

EXTRA EGGS

BY USING KARSWOOD

With almost monotonous regularity the leading men in the public life of the country keep telling us that half our troubles would be solved if we only produced more. " Produce—produce—produce " is their exhortation, and there is a very sound reason behind it. For greater production means reduced costs of production, and it is only by reducing the costs of production that Australia will be able to compete in overseas markets.

And the production of eggs is no exception. If you obtain a greatly increased number of eggs for an infinitesimal increase in cost, you have reduced your costs of production and are thus better able to meet a fall in price if it occurs. And if prices are up, then it is so much extra in your pocket. Karswood Poultry Spice increases egg production to an amazing degree, but it obtains its results in a perfectly natural manner. It does not force, because it contains no forcing ingredients, but gently coaxes the birds to more active laying. A half-pound packet, costing 1/–, supplies 20 hens for 16 days.

" From two eggs to six eggs a day "

Dear Sirs,

I have only 6 Black Orpingtons and 6 White Leghorns in separate pens. From the 6 black hens I was getting only two to three eggs a day before using Karswood Poultry Spice ; after using for 11 days I got 6 eggs daily. From the 6 White Leghorns I was getting from 1 to 4 eggs a day ; now I am getting 4 to 6 daily, and with eggs at the price now, it is a fine record for Karswood Spice. Besides producing more eggs, it keeps both hens and chickens in a healthy condition. I believe in Karswood for young chicks, as it is a fine tonic, and encourages growth. I feed my fowls wheat and cracked corn alternate mornings ; midday meal consists of green feed, sometimes lettuce and minced lucerne ; evening meal, mash, not too soft, with Karswood Poultry Spice. I also give them chopped onions twice weekly, which I believe is a splendid tonic for fowls, and Epsom salts once a week ; twice a week I dig a patch of earth for them to get grubs in. In conclusion, let me add that Karswood Poultry Spice is the poultryman's money maker.

(*Sgd.*) *JAMES SMITH,*
Cardwell Street, Canley Vale.
Original letter on file for inspection.

Make this Test.

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results — Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Supplies.

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices: ½lb. packet 1/–; 1lb. packet 2/–; 7lb. tin 13/–; 14lb. tin 25/–; 28lb. tin 48/–.

6.M.29

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

Poultry and Beekeeping
MCT

The constant drop of water
  Wears away the hardest stone;
The constant gnaw of Towser
  Masticates the toughest bone;
The constant cooing lover
  Carries off the blushing maid;
And the constant advertiser
  Is the one who gets the trade.

Answers to Queries.

Breeding Muscovies.

Questions:

"W.A.S." (Wandin) writes:—

1. I have a breeding pen of Muscovies. When young stock is ready to mate, will I have to buy different strain drakes to mate them to?

2. Will it be necessary to keep buying fresh drakes every year?

3. Do big breeders keep two different strains, or introduce fresh blood every year?

4. Is whole maize a satisfactory grain to feed, or does it have to be crushed?

5. Could you give me an idea of how leading breeders mate young ducks over, say, a period of three years??

Answers:

1. You would require unrelated second-season drakes to mate with the young ducks.

2. It is not necessary to purchase fresh drakes every year.

3. I keep three strains, but also introduce fresh blood occasionally.

4. Whole maize is good feed, but crushed maize is better. I have never given a grain ration to ducks, as a mash is more economical. Chaffed green feed represents 50 per cent. of the mash. Mashed potatoes at £1 per ton take the place of pollard. Animal food, such as butcher's offal, fresh blood, horseflesh, screenings, etc., is used in place of the more expensive prepared meat meals.

Restaurant offal can be utilised to a large extent. Only a small percentage of bran and pollard is needed. Muscovies treated as the pigs of the poultry industry, cannot fail to return a good profit on capital outlay.

5. Line-breed your stock, but do not go closer than ⅞ blood. The introduction of fresh blood is advisable every three or four years, otherwise your stock would probably deteriorate.

(Answer by Mr. F. Gilbert, Noble Park, Victoria.)

White Leghorns With Cough.

Question:

"Leghorn" (Geelong) writes:

Could you advise me how to treat my White Leghorns? Several of them have developed a kind of cough, which seems worse at night. They eat well, and some of them are laying, but keep on making a peculiar noise. It is not like bronchitis, and I have tried several remedies, without success.

Answer:

Your birds appear to be suffering from a form of bronchial catarrh, which may have been caused by the fumes from damp or mouldy litter.

Isolate affected birds; place them in a warm, clean, and well-ventilated pen, and feed on soft food. Give them each a spoonful of sweet oil; add Merval to the drinking water, and disinfect the nasal cavity by dipping their heads in a solution of Condy's crystals, reduced to the color of wine. See that the pens are kept free from all insect pests, as these quickly sap the vitality of birds and make them easily susceptible to various troubles.

Turkey Raising.

Question:

"L.C.W."(Yarrara),writes:

Do you know of any publication dealing with turkey rearing?

Answer:

A bulletin has been issued by the Chief Poultry Expert, Mr. W. C. Rugg, dealing with various phases of the breeding and management of turkeys. I would advise you to write to the Chief Poultry Expert, Department of Agriculture, Flinders-street Extension, Melbourne, for a copy of this publication, which is free.

BEES IN ORCHARDS.

Pollination is Assisted.

A RECENT remarkable incident was the bringing of hundreds of hives of honey bees into orchards of southern New Jersey, in order to speed up pollination to insure better fruit. The fruit growers, finding that, with their trees in full blossom, subsequent cold weather and chilly rains were keeping bees in their hives, decided on this expedient as an offset to a probably unduly light set of fruit. Bees do not venture very far from their hives during a spell of cold, or hard rains, so the growers determined to try the plan of "bring Mohammed to the mountain," placing the hives in the orchards where the bees could keep in a restricted area.

The present year, in fact, marks the greatest use of bees ever made in New Jersey for the fruit orchards, more than 3,000 hives of bees having been placed therein throughout the State, according to Raymond Hudson, to pollinate the blossoms. Mr. Hudson, who is assistant entomologist at the New Jersey Experiment station at New Brunswick, says that immediately the cold and rainy weather has ended, pollination will be rapid enough to gain much lost ground, in that the bees are right on the spot.

Fruit growers report one of the heaviest sets of blossoms in recent years and indications now point to a record crop of Apples and Peaches, provided nothing interferes with the blossoms for the next few weeks and the bees have a chance for activity.—K. H. L., in "Seed World," U.S.A.

Jack: "Could I have just one kiss?"
Jill: "Sorry, but I don't cater to the retail trade."

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.
Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
McKean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
H. Wilson, Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.
Young, J. H. & Co. Pty. Ltd., Western Market.

QUEENSLAND.

Brisbane.
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J. & Co., Fruit Markets.

TASMANIA.

Hobart.
E R. Cottier Pty. Ltd., 88 Collins St.
Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Launceston.
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.
Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.
Guerra & Co , Long Acre, Covent Garden.
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull.
Connelly Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.
Manchester.
The Port of Manchester, rep., W. J Wade, 8 Bridge Street, Sydney.
Liverpool.
MacGeorge & Jardine,
Woodall & Co.
Bristol and Southampton.
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin.
Connelly, Shaw Ltd.
Glasgow.
Russell, Turnbull & Co.

GERMANY.

Bremen.
Fruchthandel, Gesellschaft.
Hamburg.
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam.
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen.
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

Overseas Markets.

Great Britain.

London (Covent Garden) (18/1/30).—Apples: Oregon Newtown, 14/- to 18/6 per case; Cal. Newtown, 14/- to 15/- per case; Winesaps, 10/- to 12/-; Spitzenberg, 11/- to 12/-; Jon., 11/- to 13/-. Pears: Comice, 13/- to 16/- per half case; D'Anjou, 22/- to 23/- per half case; W. Nelis, 20/- to 22/- per half case.

Spitalfields.—Apples: B.C. Jon., 10/6 to 12/6 per box; Jon., 10/- to 13/-; Cal. Newtown, 13/- to 14/6; Oregon, 14/- to 17/- per box. Pears: American Winter Nelis, Cal. 20/- to 22/-, Wash. 13/- to 15/-; B. Anjou, 20/- to 22/- per box; Comice, 12/- to 16/- per half-box.

Glasgow (Jan. 16).—Apples: Winesap, fancy, 12/- to 12/6; extra fancy, 13/- to 13/6; Newtown, 14/6, 16/-, and 17/-; Del., 15/- to 16/- per case. Pears: Cal. W.N., full boxes 23/- to 24/-, half-boxes 12/6 to 13/-.

Bristol (15/1/30).—Oranges: Jaffa 144's and 152's, 16/- to 18/- per box; Valencia, 240's, 12/- to 16/-; 300's, 11/- to 12/-; 360's, 10/- to 11/-; 504's, 11/- to 13/-. Pears: Cal. B. Hardy, 21/- to 24/-; Comice, 22/- to 25/-; W.N., 21/- to 24/- per case. Apples: Oregon Newtown, 18/- to 21/- per box; Jon., 11/- to 14/-; Rome Beauty, 11/- to 13/-; Winesap, 12/- to 14/- per box.

Edinburgh (15/1/30).—Apples: Ore. Newtown, 15/- to 17/-; Cal. Delicious, 14/- to 15/-; Winesap, 12/6 to 13/6 per case; Valencia 240's, 11/6 to 12/-; 300's, 10/- to 11/-; 350's, 8/- to 9/- per case. Pears: Cal. W.N., 14/- to 15/- per case.

Hull (15/1/30).—Washington Winesap, fancy, 180's 10/6, 198's 10/3 to 10/6, 216's 10/-; B.C. Yellow Newtown, extra fancy, 138's 16/6, 200's 16/-, 216's 16/6; fancy, 150's 15/6, 188's 15/3, 198's 15/-, 216's 15/-.

Liverpool (15/1/30). — Apples: Winesap, ex. fancy, 12/6 to 13/3; Oregon Newtown, ex. fancy, 17/- to 19/- per box. Valencia Oranges, extra superior quality, 240's 10/6, 300's 8/6 to 9/-, 360's 9/6, 504's 9/6 to 10/- per half-case. Pears: W.N., 14/- to 16/- per box.

Manchester (14/1/30). — Apples: Cal. Newtown, 14/- to 16/-; B.C. Jon., 14/- to 16/-; Newtown, 17/- to 19/-; Spitzenberg, 13/6 to 15/-; Winesap, 12/6 to 15/-; Delicious, 15/- to 15/6; Oregon Newtown, 16/- to 21/- per box.

Newcastle-on-Tyne (14/1/30). — Apples: Oregon Newtown, C grade, 11/- to 12/- box.

New Zealand.

Dunedin (20/2/30). — Messrs. Reillys' Central Produce Mart Ltd. report prices were as follows:—Apricots, cases 5/6 to 7/6, crates 4d. to 6d. lb.; Peaches, cases 4/6 to 6/6, crates 3½d. to 5d. lb.; Nectarines, cases 5/- to 6/6, crates 3d. to 5d. lb.; Greengages, 6/- to 8/-; Raspberries, 1/2 pottle; Loganberries, 1/- pottle, 10/- bucket; Red Currants, 5d.; cooking Plums 2d. to 3d., dessert 3d. to 5d.; Grapes, local, 1/6 to 1/9; Kakanui, 1/4 to 1/7. Apples: Gravensteins, 7/6 to 9/-; other desserts, 7/- to 9/-; cooking, 5/6 to 7/6. W.B.C. Pears, dumps 9/- to 12/-, halves 4/- to 4/9. American Navels, 46/-. Mission Lemons, 55/-; Messina, 192's, 25/-. Grapefruit, 36/-. Bananas, ripe repacks, 32/- per case.

Victoria.

Melbourne (4/3/30).—The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market yesterday for average quality fruit:—Apples, good to choice eating, 3/- to 6/-; prime quality, higher; do., cooking, 2/- to 4/-. Bananas, green, Queensland, special, 20/-; choice, 18/- to 19/-; standard, 12/- to 17/-; plains, 8/- to 11/- per double case. Oranges, best, 30/- to 34/-; lower grades and green, from 10/- per case. Passion Fruit, best 12/- to 13/- per half case. Peaches, white flesh, to 8/-; yellow flesh, 3/- to 5/-. Pears, 2/- to 4/-; good green lines, 5/-. Pineapples, Queens, 9/- to 12/- per double case. Tomatoes, Victorian, best available, bulk 8/-, a few 9/- per case. Grapes: Only a few best qualities were available, and realised up to 10/-; bulk and inferior were offered at lower rates, some were unsaleable.

The Melbourne manager of the Federal Citrus Council of Australia reports that prices were as follow:—Valencias, best grades, 112's upwards, 30/- to 34/-; a few specials higher; choice, best counts, to 28/-; medium, 20/-, and lower grade, from 8/- to 15/-. Best Victorian Lemons, best counts, 15/- to 17/-; lower grades difficult to sell. Small and plain Lemons were almost unsaleable.

West Australia.

Perth (22/2/30).—Apples, eating, flats 4/- to 9/-, dumps 5/- to 13/-; cooking, flats 3/- to 8/-, dumps 6/- to 9/6. Citrus: Oranges, plain, flats 7/- to 15/-, dumps 7/- to 17/-; Lemons, 5/- to 13/-. Stone Fruit: Plums, Satsuma 4/- to 11/-, Wickson 2/- to 9/-, Burbank 2/- to 7/6, Pond's Seedlings 4/- to 12/-; Peaches, 7/- to 15/- (inferior from 3/6); Nectarines, 7/- to 15/- (inferior from 4/-); Pears, Barlett 2/6 to 7/3, other varieties 1/- to 4/-; Grapes, open, white, 3/- to 5/6, colored 4/- to 8/-, closed 2/- to 4/-; Tomatoes, 7/- to 14/- (inferior from 2/-).

Tasmania.

Hobart (1/3/30).—Alx., 2/6 to 4/3; Gravensteins, 2/- to 7/-; M.C., 3/- to 4/-; P.H., 3/- to 4/-; W.P.M., 3/6 to 5/-; J.G., 3/- to 4/-; P.G.N., 3/6 to 4/3; V.P.M., 3/6 to 4/6; W.F., 2/- to 3/-; Sl., hard, 5/- to 8/-; D.C., 3/- to 4/-, inferior and small grades 1/6 to 2/6 per case; W.B.C. Pears, 2/6 to 5/- per case; Clapp's Favorite, 2/6 to 6/- per case; Peaches, 2/6 half case; ditto, 1/6 to 2/6 tray; Nectarines, 2/- to 2/6 per tray; ditto, 4/6 half case; Plums, light varieties 2/6 to 3/-, dark vars., 2/- to 3/-; Prunes, 1/6 to 2/- half case; Apricots, 1/6 to 3/- per half case; Strawberries, 1/6 per punnet; Loganberries, 3½d. lb.; Tomatoes, best lines 11/- to 16/-, ripe lots 3/- to 10/- per case and 2/6 to 4/- per half case.

Queensland.

Brisbane (26/2/30).—Local Fruit: Oranges, 4/- to 7/- bush. case; Lemons, 3/- to 5/- a quarter-case, Limes 3/- to 7/-; Mangoes, local, 4/- to 6/-; Passion Fruit, 3/- to 7/-; Persimmons, 1/- to 3/-; Pineapples, smooth 5/- to 8/- a case, rough 5/- to 7/-, loose 1/- to 4/- a dozen; Peaches, 2/- to 4/- a half-bushel case; Plums, 3/- to 6/-; Apples, eating, 3/- to 8/- a bushel case; cooking, G.S. 6/- to 7/-, others 3/- to 5/-; Pears, 5/- to 7/-; Kentucky, 7/- to 9/- (P.T.); Williams, 8/- to 9/-; Grapes, local, 2/- to 3/- per lb.; Stanthorpe Muscatels, 3/- to 4/- and 5/- to 7/- a case, others 4/- to 5/-; white, 3/- to 5/-; Monstera Deliciosa, 4/- to 6/- a quarter case.

New South Wales.

Sydney (28/2/30).—Apples: Local dessert, 4/- to 10/-; Queensland Delicious and Jonathans, 7/- to 10/-; cooking, Granny Smiths 3/6 to 8/-, others 3/- to 6/-; Bananas (genuine grades), special 21/- to 25/-, choice 15/- to 18/-, standard 10/- to 14/-, plain 7/- to 10/-; Norfolk Island, 8/- to 21/- per case. Citrus Fruits: Lemons, local, extra choice 10/-, choice 8/-, medium 6/- to 7/-, small 5/-; Italian to 20/-; Oranges, common, second crop 2/- to 7/-, second crop navels 3/- to 10/- per bushel case; American navel, 45/- per case; Figs, 3/- to 4/- per quarter bushel case; Grapes, Hamburgs 4/- to 6/-, Black Muscats 5/- to 8/-, White Muscats 4/- to 7/-, Waltham Cross 3/- to 6/-, White Crystal 6/- to 7/-, others from 3/- per half bushel case; Peaches, 2/- to 5/- per half bushel case; Victorian, Lady Palmerston 5/- to 10/-, White clingstones 5/- to 10/-, Nichol's Orange clingstone 5/- to 8/-, white slipstones, small 4/- to 6/-, large 6/- to 10/- per bushel case; Pears, W.B.C., local 3/- to 7/-, a few 8/-; cooking, 2/6 to 4/-; Victorian 4/- to 7/-, a few 8/- per bushel case; Pineapples, Queens 7/- to 14/-, Ripleys 6/- to 8/- per case; Plums, 1/6 to 9/- per half bushel case; Tomatoes, 3/- to 7/-, a few 8/- per half bushel case.

THE SUGAR POSITION.

An appreciated letter is to hand from Mr. W. J. Young, Gravelly Beach, West Tamar, Tasmania. Mr. Young states the people of Australia, and particularly the fruitgrowers are badly hit by the uneconomic position of the sugar industry, and asks the "Fruit World" to keep "pegging away" on this subject.

Don't Miss the

Red Hill SHOW

Wednesday, March 19, 1930

Car Service Leaves Batman Avenue 9.30 a.m.

High Jump, Log Chop, Trot, Merry-go-Round, Motor Events. First-class Agricultural and Horticultural Exhibits.

Luncheon, Afternoon Tea, Soft Drinks, Etc., on Ground.

Dance at Night in Red Hill Hall.

First-class Music, Floor, Prizes and Supper.

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Entries Close Monday, March 17.

Pumping Plants, Engines, etc.——

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Consult us for your requirements

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BOX HILL

LOOK AT THE MAP!

The Port of Manchester

Is the Best Market and Distributing Centre for serving 12,000,000 Consumers

IN

"The Heart of Industrial England"

The following extracts from "Agricultural Market Reports" (issued weekly by the British Board of Agriculture) indicate the average prices realised last season for Australian Apples of certain varieties at Manchester and other ports respectively:—

COMPARISON OF AVERAGE PRICES.

		HULL Quality.		LIVERPOOL Quality.		LONDON. Quality.		**MANCHESTER.** Quality.	
WEEK ENDING:	VARIETY:	1st.	2nd.	1st.	2nd.	1st.	2nd.	**1st.**	**2nd.**
1929—									
24th May	—Cleopatra	15/6	14/–	15/–	14/–	15/6	14/6	**17/–**	**16/–**
31st May	,,	15/6	14/–	15/–	14/–	16/–	15/6	**17/–**	**16/–**
7th June	,,	15/6	14/–	16/6	15/–	16/–	15/–	**18/–**	**15/–**
14th June	,,	16/–	14/–	16/6	15/–	16/–	15/–	**17/–**	**15/–**
21st June	,,	17/–	16/–	17/–	15/6	—	—	**19/6**	**17/6**
28th June	,,	20/–	18/–	20/–	17/6	—	—	**22/–**	**20/–**
5th July	,,	21/–	19/–	20/–	18/–	—	—	**25/–**	**22/–**
24th May	—Jonathan	15/6	14/–	15/–	14/–	16/–	14/6	**17/–**	**16/–**
31st May	,,	15/6	14/–	15/–	14/–	16/–	15/–	**17/–**	—
7th June	,,	15/6	14/–	15/–	13/–	15/–	14/–	**18/–**	**16/–**
14th June	,,	16/–	14/6	15/6	14/–	16/–	15/–	**17/–**	**15/–**
21st June	,,	16/–	14/6	16/6	15/–	—	—	**18/–**	**16/–**
28th June	,,	18/–	17/–	19/–	16/6	—	—	**22/–**	**18/–**
14th June	—Sturmer Pippins	14/–	13/–	14/6	13/6	—	—	**16/–**	**14/6**
21st June	,,								
28th June	,,	18/–	16/–	18/6	16/–	—	—	**22/6**	**18/–**
5th July	,,	18/6	16/–	20/–	18/–	—	—	**24/–**	**22/–**
12th July	,,	20/–	17/6	20/–	18/–	—	—	**22/–**	**20/–**
19th July	,,	20/–	18/–	21/–	18/–	—	—	**21/–**	**20/–**
26th July	,,	21/–	19/–	21/–	18/–	—	—	**21/–**	**20/–**

NOTE.—No quotations in respect of London prices are included in the "Agricultural Market Reports" for the weeks where blanks are shown in the above comparative statement.

Over 66,000 tons of Imported Apples are consumed annually in Manchester's Economic Area

but comparatively few of these are from Australia or New Zealand, owing to infrequency of direct shipment and the cost of transhipment from London, which averages 8¼d. per case plus deterioration due to manifold handling.

Ship Direct to Manchester Docks

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Particulars re selling brokers, forwarding rates to interior towns, etc., on application to—

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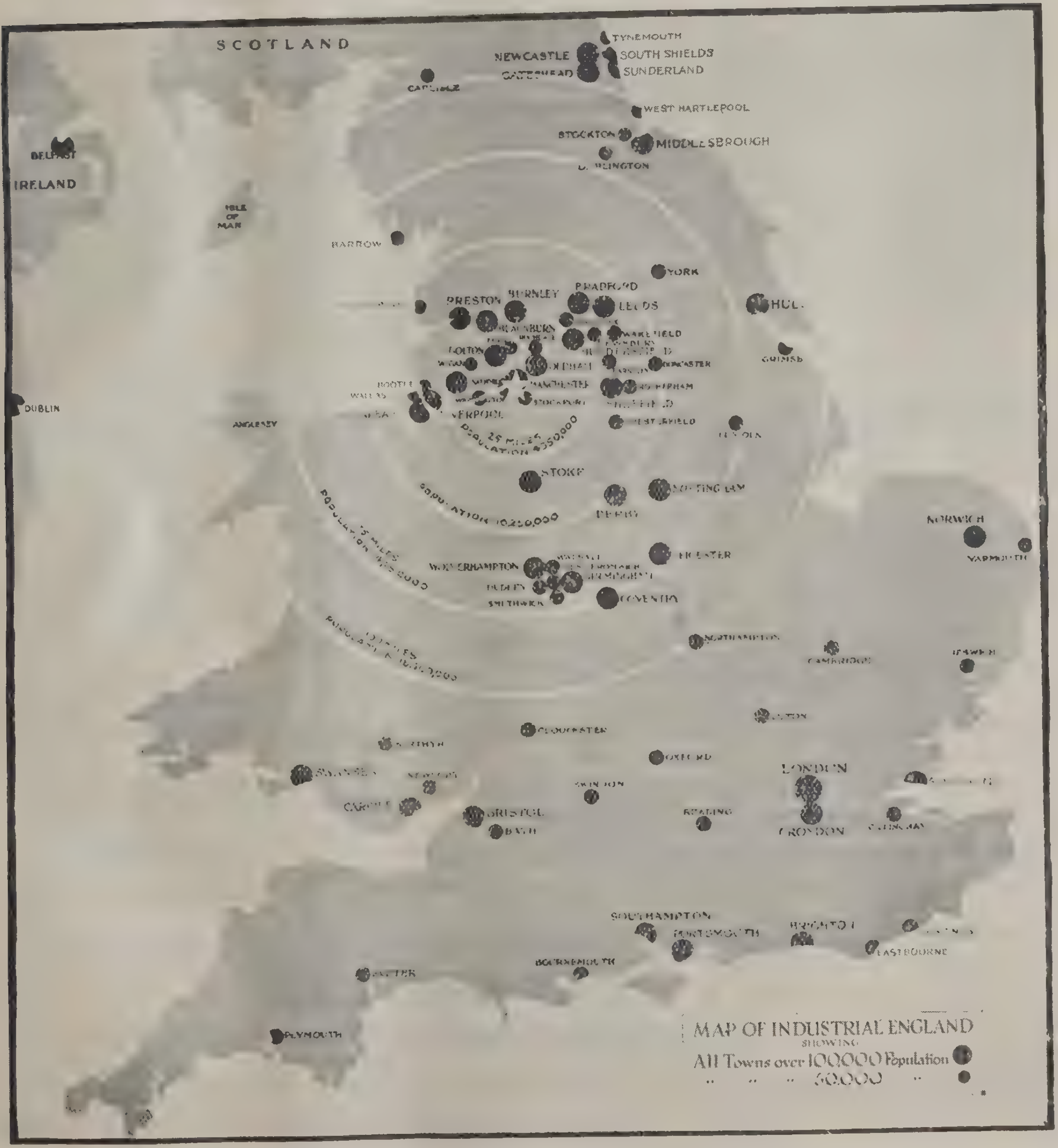
SCOTLAND
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SOUTH SHIELDS
GATESHEAD
SUNDERLAND
CARLISLE
WEST HARTLEPOOL
STOCKTON
MIDDLESBROUGH
DARLINGTON
BELFAST
IRELAND
ISLE OF MAN
BARROW
YORK
BRADFORD
LEEDS
PRESTON
BURNLEY
HULL
WAKEFIELD
GRIMSBY
BOLTON
OLDHAM
DONCASTER
BOOTLE
MANCHESTER
WALLASEY
STOCKPORT
LIVERPOOL
DUBLIN
ANGLESEY
CHESTERFIELD
LINCOLN
25 MILES
STOKE
NOTTINGHAM
POPULATION 10,250,000
DERBY
NORWICH
YARMOUTH
LEICESTER
WOLVERHAMPTON
WALSALL
BIRMINGHAM
DUDLEY
SMETHWICK
COVENTRY
NORTHAMPTON
CAMBRIDGE
IPSWICH
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" " " 50,000 " ●

PORT OF MANCHESTER

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"In the Heart of Industrial England."

AUSTRALASIAN FRUIT IN ENGLAND.

Good Demand Expected.

American, Canadian, and English Apples Not Keeping Well.

AN INTERESTING LETTER dated January 10, is to hand from Ridley and Houlding, fruit salesmen, Covent Garden, London, who state they consider the prospects for the forthcoming Australian and New Zealand Apple season to be fairly satisfactory. American, Canadian and English Apples are not keeping well, thus forcing growers to market their Apples at a much earlier period than anticipated, and the opinion is expressed that supplies will be fairly light during February and March. Continuing, the firm states: "We certainly look forward to some very satisfactory prices for the early shipments, and if the fruit is satisfactory, there should be some very favorable markets during the season. The prices realised of course, will depend on the quantity being shipped, not only from Australia and Tasmania, but also from New Zealand, **but we do not think we shall have many late arrivals of American Apples, as we are informed the American Winesaps are not holding up well this season.** Moreover, recent reports from the United States indicate that there is a fairly strong domestic demand, which, if it continues, will absorb the greater proportion of the holdings in cold storage."

Their agents in Australia are:—The International Fruit & Mercantile Co., 410 Flinders-lane, Melbourne, Victoria; Bache Bros., New Market, Rundle-street, Adelaide, S. Aust.; Dennys Lascelles Ltd., 422 Collins-street, Melbourne, Victoria; Messrs. Paterson & Co., Perth, W.A.

APPLE AND PEAR EXPORT.

Season Opens Favorably.

THE Australian Apple and Pear export season has opened favorably. The quality of the fruit is good, and there is a commendable improvement in the grading and packing.

From Victoria, the first Apple boat was the "Delphic," which loaded 22,000 cases, and sailed on February 18. Next came the "Comorin" with 18,000 cases, and the "Moreton Bay" with 8,853 cases. There is a big programme for March shipments.

Tested and Proved!

CLENSEL

A Wonderful Insecticide and Fungicide.

Clensel is not a new spray. It is used extensively throughout the world, and has

Won Great Appreciation
In
Australia.

The fruitgrowers' best friend. Non-Poisonous. non-inflammable. Destroys insect and fungus pests: a tonic for trees and plants.

Non-injurious.

Very effective on soft bodied insects. Can be mixed with Arsenate of Lead as a Spreader.

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Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

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- - Largest Firm of - -
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Consignments Solicited.

Sales on Commission by Private Treaty Only.

Liberal Advances Made on Consignments to Cover Cost, Freight, etc.

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Catalogues Post Free

Specialties—FRUIT TREES, ROSE PLANTS, and KUNDE SECCATEURS and KNIVES.

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Bankers: Midland Bank Ltd.

REQUIRE UNLIMITED CONSIGNMENTS OF AUSTRALIAN APPLES AND PEARS TO ALL THE PRINCIPAL BRITISH AND CONTINENTAL MARKETS. LIBERAL ADVANCES MADE AGAINST BILLS OF LADING. SHIPPING No. "737."

Our spacious Sale Rooms are excellently situated in the heart of Covent Garden Market, and our staff of specially trained salesmen are in constant touch, all the year round, with a most extensive clientele of the best buyers.

SEND US SOME TRIAL SHIPMENTS. WE GUARANTEE HIGH PRICES, PROMPT SETTLEMENTS, and ENTIRE SATISFACTION.

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Representatives are required in Victoria, S.A., W.A., and N.Z.

Denmark Wants our Victorian Apples

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Commonwealth Loan

Interest 6% Period: 7 Years

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Holders of Stock or Bonds in the 6 per cent. Commonwealth Loans maturing on 15th March, 1930, and 15th December, 1930, are invited to convert into this new Loan.

Conversion will be effected as on 15th March, 1930, and converted holdings will continue to carry interest at 6 per cent. per annum; and will mature on 15th March, 1937.

Cash Subscriptions

All persons may make cash subscriptions to this Loan. The amount subscribed may be paid in one amount in full; or a deposit of 10 per cent. of the amount subscribed may be lodged with the application, and the balance paid in one amount at any time up to Friday, 14th March, 1930. Interest is payable from the date of lodgment of moneys.

All interest is FREE OF STATE INCOME TAX.

Applications, both conversion and cash, may be lodged at any Banks, Savings Bank, Money Order Post Office, or with any member of a Stock Exchange.

EDWARD G. THEODORE,
Commonwealth Treasury. Treasurer.

Pear Export.

The first ship taking Pears was the "Chitral," which sailed on January 28 for London with 1,200 bushels of Pears of the Williams variety, packed for the most part in the long bushel case. The other shipments were: "Maloja," 4,000 cases of Williams Pears for London; "Baradine," 1,400 cases Williams; "Orvieto," 400 cases Williams; "Comorin," 1,200 cases Williams. The "Otranto" took 5,000 cases of Williams and Howells, and the "Tekoa," sailing early in March, with 12,000 cases, mainly Howells.

Plums. — Some consignments of Satsuma and Grand Duke Plums have gone forward, the "Maloja" taking 800 half-cases and the "Comorin" 400 half-cases.

With regard to Apple shipments, a noticeable feature was the large percentage of Canadian standard cases used. The neat softwood boxes looked especially well, especially as most had a finishing touch by the use of handsome colored labels.

Messrs. T. S. Johnson & Co., fruit brokers, Stanley-street, Liverpool, England, have presented a handsome cup for competition at the Australasian Fruit Exhibition, to be held at Hobart, on May 7 next. The prize is for the best exhibit of four cases of Sturmers—two wrapped and two unwrapped, size 2½ ins. The Hobart representatives of Messrs. Johnson & Co., are E. R. Cottier Pty. Ltd., 82 Collins-street, Hobart.

GLASS. CLOTH
CHEAPER THAN GLASS
For POULTRY & PLANTS
USE THE ULTRA-VIOLET RAYS

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The name Glass Cloth is imprinted on every yard.
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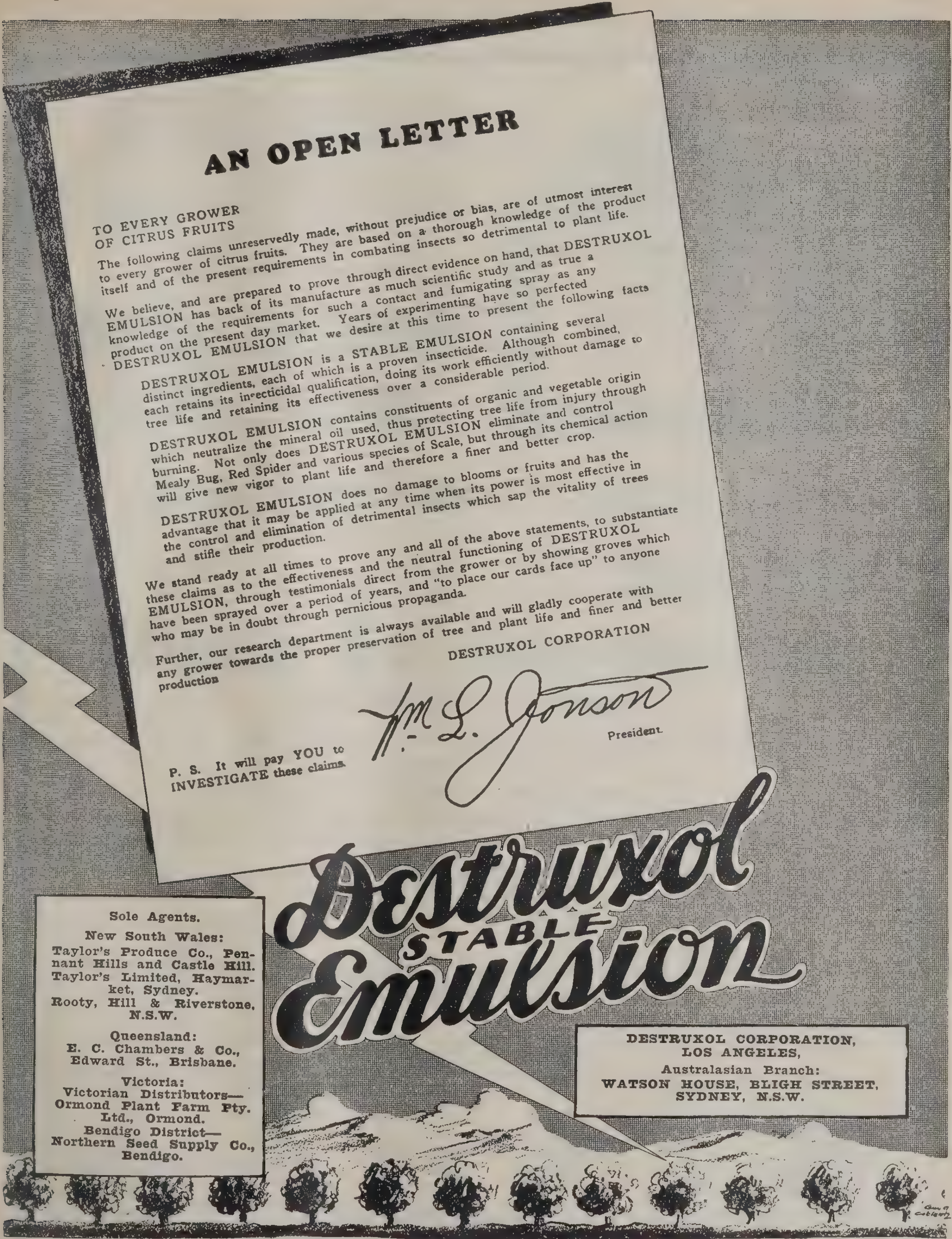

AN OPEN LETTER

TO EVERY GROWER
OF CITRUS FRUITS

The following claims unreservedly made, without prejudice or bias, are of utmost interest to every grower of citrus fruits. They are based on a thorough knowledge of the product itself and of the present requirements in combating insects so detrimental to plant life.

We believe, and are prepared to prove through direct evidence on hand, that DESTRUXOL EMULSION has back of its manufacture as much scientific study and as true a knowledge of the requirements for such a contact and fumigating spray as any product on the present day market. Years of experimenting have so perfected DESTRUXOL EMULSION that we desire at this time to present the following facts

DESTRUXOL EMULSION is a STABLE EMULSION containing several distinct ingredients, each of which is a proven insecticide. Although combined, each retains its insecticidal qualification, doing its work efficiently without damage to tree life and retaining its effectiveness over a considerable period.

DESTRUXOL EMULSION contains constituents of organic and vegetable origin which neutralize the mineral oil used, thus protecting tree life from injury through burning. Not only does DESTRUXOL EMULSION eliminate and control Mealy Bug, Red Spider and various species of Scale, but through its chemical action will give new vigor to plant life and therefore a finer and better crop.

DESTRUXOL EMULSION does no damage to blooms or fruits and has the advantage that it may be applied at any time when its power is most effective in the control and elimination of detrimental insects which sap the vitality of trees and stifle their production.

We stand ready at all times to prove any and all of the above statements, to substantiate these claims as to the effectiveness and the neutral functioning of DESTRUXOL EMULSION, through testimonials direct from the grower or by showing groves which have been sprayed over a period of years, and "to place our cards face up" to anyone who may be in doubt through pernicious propaganda.

Further, our research department is always available and will gladly cooperate with any grower towards the proper preservation of tree and plant life and finer and better production

DESTRUXOL CORPORATION

Wm. L. Jonson
President

P. S. It will pay YOU to
INVESTIGATE these claims.

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Taylor's Limited, Haymarket, Sydney.
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Queensland:
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Victoria:
Victorian Distributors—Ormond Plant Farm Pty. Ltd., Ormond.
Bendigo District—Northern Seed Supply Co., Bendigo.

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Australasian Branch:
WATSON HOUSE, BLIGH STREET,
SYDNEY, N.S.W.

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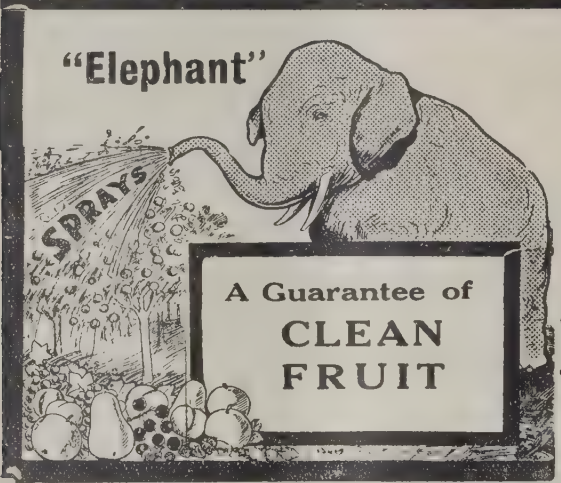

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Sprays Only

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Order Now—

Arsenate of Lead

Paste or Powder

We strongly recommend growers to use Paste, as we feel certain they will obtain better results than by using Powder.

Paste is finer and more adhesive.

For growers who intend using Oil to help control the Codlin Moth, we can supply you with a White Oil Emulsion similar in all respects to the imported article, and at a lower price.

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of Fruit Trees

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Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

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Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers' MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6.** All other places, **10/6,** post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement notwithstanding the fact that a contract may have been entered into for the use of a certain space.

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INTERSTATE DRIED FRUITS CONFERENCE.

At the recent Interstate Conference of State Dried Fruits Boards in Sydney, Mr. G. J. Evatt presiding, resolutions were carried: (a) Requesting the retention of the present British preference in respect to dried fruits; (b) In the event of the British Government withdrawing preference the Commonwealth Government be urged to submit proposals for absorbing the surplus of Australian dried fruits.

Decided to request the Council for Scientific and Industrial Research to make available to the dried fruits industry by field demonstrations, the results of the experiments carried out at Merbein.

A Consultative Committee was appointed, consisting of the Chairman of the Boards of Victoria, South Australia and New South Wales,—namely, Messrs. Balfour, Pope, and Evatt.

The next conference will be held in Melbourne in January, 1931.

The Californian Citrus crop is valued at £24,000,000.

Cover Crops for Fruit Gardens.

Leguminous Crops Are of Great Value in Maintaining Soil Fertility.

By R. Duncan Brown, Orchard Supervisor, Murrabit, Victoria.

SOIL fertility is the base of good orchard management, and, realising this, it is surprising how few orchardists practice cover cropping.

It is the cheapest method of supplying all the essential elements necessary to plant life, besides storing up a supply of humus in the soil, making it warmer in the winter, and cooler in the summer.

Investigations show that, while a sandy soil may be able to hold 25 per cent. of its weight in moisture, and clay 50 per cent., humus can retain almost 200 per cent., or double its weight, which speaks for itself in our semi-arid soils.

The physical condition of a soil is everything. If the soil is in good physical condition, plant food is automatically made available in sufficient quantities by the agency of soil bacteria. It is known that such bacteria thrives only in certain soil temperatures which only humus can regulate.

Bacterial action begins
at a soil temperature of about 42 deg., becoming more active until the temperature is between 80 deg. to 95 deg., when it is at its maximum. Above that it gradually diminishes until it vanishes completely at 120 deg.

If heavy soils, devoid of humus, remain constantly cold through water evaporation, their temperatures are inimical to bacterial action, and similarly with sandy soils, if their temperatures are raised. In many of our soils this spring, odd patches of citrus trees growing on "cold" patches lost their leaves through soil temperatures being too low to allow of root action. A correction of the physical condition of the soil would have obviated this.

The soil is a huge laboratory. Chemical changes are constantly taking place, mostly to the benefits of plant life. When a cover crop is turned in a species of soil bacteria at once attacks it, causing it to decay, thus liberating ammonia. This ammonia, combining with the carbonate in the soil, is then fixed by another organism known as the nitrite fixing organism, whereby nitrous acid is formed. This in its turn is again transformed by another organism to nitric acid. Nitric acid when combined with a base forms a nitrate. All plants, with perhaps the exception of rice, take up their nitrogen in the nitrate form.

As time goes on, the mineral elements, especially phosphorus and potassium, are set free in a very available form. It will thus be seen that if a soil is deficient in humus, all plant food is deficient, and the tree starves, unless fed entirely on artificial manures, which is analogous to feeding a human being entirely on highly concentrated tinned fruit.

Leguminous Cover Crops.

PERHAPS THE MOST IMPORTANT factor in leguminous cover crops is the fixing of the inexhaustible free nitrogen of the air by the nitrogen-fixing bacteria. The familiar nodule injury is caused by an enzeme into which the bacteria gains access, and, using the plant as host, it in turn imparts into the plant the free nitrogen which it takes from the air.

When no leguminous crops are grown, these bacteria must of necessity obtain their nitrogen from the soil itself. The number of nodules is generally indicative of the extent of such bacteria. About 2-3rds of the nitrogen contained in the crop is obtained from the air by the bacteria, and 1-3rd from the soil. In the plant approximately 2/3rds is stored in the leaf and stems, and the remainder in the roots, so that if the crop be cut or harvested the soil is practically left as it was previous to sowing, but if turned under the amount of nitrogen added to the soil is appreciable, and is given by investigators at various figures. An American experimental station, after exhaustive experiments, found that 54 lbs. of nitrogen per acre was added to the soil per year, which would be equivalent to about 2 lbs. sulphate of ammonia per tree.

The time of turning in a cover crop is also a very important factor. The riper the crop the longer the bacteria will necessarily take to decompose it, and it is possible that the availability of nitrates resulting therefrom may be delayed two or three times as long as when turned in green. When turned in succulent the maximum availability takes place in from one to two months, provided, of course, sufficient moisture is available.

It is very essential that the trees obtain sufficient nitrates during the first flow of sap and during the setting period, and the orchard work should be regulated to allow of this. For this reason, and to guard against loss of nitrogen from the tops, it is not advisable to cut the crop first to allow of wilting, as some practice.

It is claimed that soil acidity is increased, due to carbonic and nitric acids when turned in green, but this has yet to be proved. Certainly no acidity will be set up on our average Mallee or sandy loam soils with average cover crops being turned in green. Their pH. value is high, showing alkalinity, which could profitably be lowered to a more neutral or even slightly acid base.

If any indication of acidity is found on our heavier soils the application of carbonate of lime is a simple matter, which, besides being beneficial to the trees themselves, helps to more readily decompose heavy cover crops as the bacteria which changes the ammonia into the nitrous form, as already stated, can only do so in the presence of ammonium carbonate.

Cover crops should be sown immediately after the last irrigation, and in a firm seed bed. The soil will be warm at that time, ensuring a good germination. The soil must be inoculated with the particular bacteria of the crop to be sown, and very often a poor crop results in the first one or two seasons, before the soil becomes properly inoculated. The nodules vary in size and shape on the various legumes, due to the particular species of bacteria on the host. These bacteria are to a certain degree interchangeable; fortunately, in our two most commonly sown, that of the field peas and beans, such is the case.

In a few cases it may be advisable to artificially innoculate a soil to be sown by the application of 200 lbs. to 400 lbs. of soil taken from a depth of three to six inches from a piece of ground where the cover crop has succeeded. The stimulant of 1½ to 2 cwt. of super. should be sown with the seed. Apart from the benefits the resulting crop obtains from this, it is returned to the soil when the crop is turned in. It has been very evident during the last three years that those crops heavily fertilised have withstood the severe conditions of frost and dryness to a marked degree, and in two cases at Nyah during 1928 a crop of beans reached an average height of 4ft. 6in. without any extra irrigation and with a winter rainfall of only three inches. Crops not so fertilised were not worth turning in.

The Reworking of Fruit Trees.

(By P. H. Thomas, Senior Horticulturist, Tasmania.)

(Reproduced from Bulletin 3, new series, Department of Agriculture, Hobart.)

(Continued from page 96, March "Fruit World.")

Budding.

BY THE METHOD OF REWORKING known as "budding" practically any kind of deciduous fruit can be either propagated or reworked to some other variety, and owing to the ease, quickness and the period of the year in which it can be performed it is much favored by operators.

Budding may be carried out with best results at that period in the growing season when the buds of the variety desired for propagation or reworking, and of the same season's wood, are matured and fully formed, and the sap movement allows the bark to lift freely

In the case of old trees, preparation for the operation should be made by "de-heading" the preceding winter. This allows a number of young growths to sprout from the stumps of the main limbs, in which the buds can be placed.

It is not advisable to attempt to "bud" into the thick bark of old trees. When the trees have been "headed back" to the desired height, only the young shoots that are in the most advantageous position to receive the buds and reproduce a strong symmetrical framework for the tree should be retained. A "T" shaped incision is made in the base of these growths where they spring from the old trees, the vertical cut being made first.

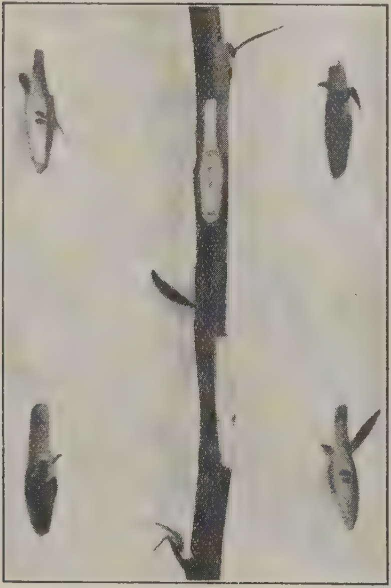
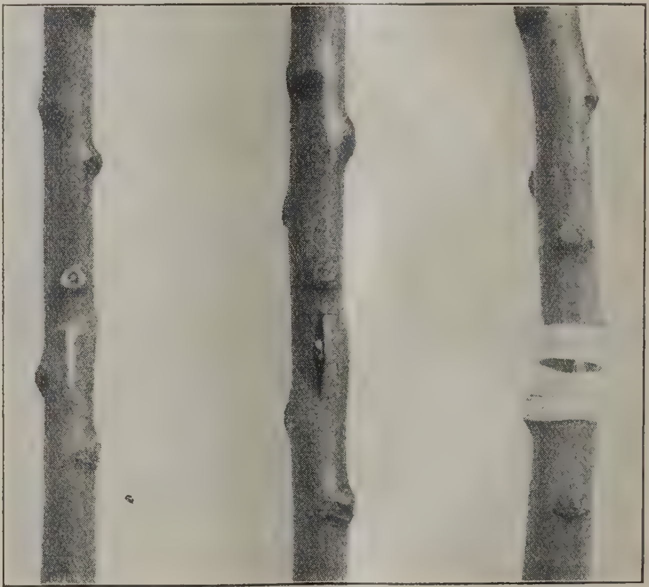


Fig. 9.—Apple scion, prepared for budding purposes, showing method of cutting buds and removal of heartwood.



(a) (b) (c)

Fig. 10.—Budding:—

(a) Method of making T-shaped incision.

(b) Showing bud inserted.

(c) Bud bound into position with raffia.

The bark is then gently lifted by using the bone end of the budding knife to allow the insertion of the bud. Care should be taken not to score too heavily into the wood under the bark in making the cut. A rounded point is better on the budding knife than a sharp one, and if the edge is sharp only a gentle pressure is required to free the bark.

The bud is removed from the "bud" stick by cutting into the bark about ¾ of an inch below the base of the bud, drawing the knife along and detaching a thin shield-shaped piece of wood and bark with the bud in the centre.

In some varieties of fruits better results are obtained by removing the small piece of "Heartwood" which is contained in the bud, by inserting the blade of the knife between the bark and wood and with a quick turn detaching them.

This should be carried out in all fruits that have thick barks, such as Cherries, Peaches, Apricots, etc. Pears, Plums, and Apples will "take" without removing the "heartwood," but it is necessary to cut a thinner type of bud, otherwise it distends the enclosing bark, and creates air pockets.

If the wood is removed from the bud, especial care should be taken to see that the small pin point of wood which runs through the centre of the bud is not removed with it. Should this come away the bud is useless, and should be discarded

The bud is now inserted between the bark and the "heartwood," and gently pushed down into its place, using the leaf stalk as a handle, until the horizontal cut and the top of the bud are flush with each other. It is then bound tightly with raffia, or some other soft pliable substance, leaving the leaf stalk protruding.

After about three weeks, if the leaf stalk readily becomes detached with a slight downward pressure, it is an indication that success has been achieved.

It will be necessary to watch the ties that have been used to hold the bud in position in order to prevent them from cutting into the bark as the shoot develops and thickens.

The bud in most cases will remain dormant until the following spring. Heading-back is carried out during the dormant period, and should be performed with a sharp knife, cutting to about half an inch above the bud, and making the cut with a slight slant away from the top of the bud.

During the ensuing growing season all superfluous shoots that may appear, other than those that spring from the inserted bud, should be removed.

(To be continued)

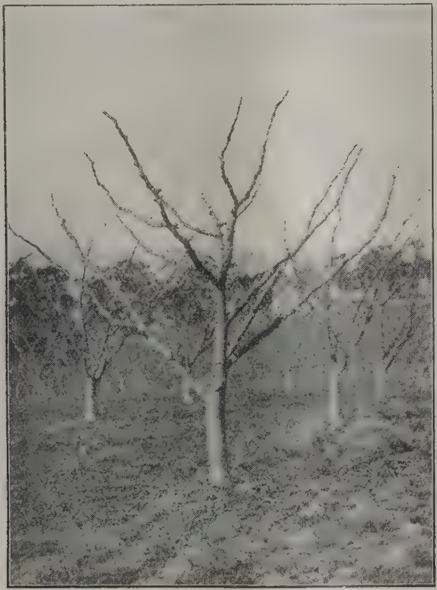


Fig. 11.—Method of reworking old trees by budding process: Apple tree stripped of all small laterals and fruit spurs during dormant period. Coal tar is applied to all large wounds as an antiseptic.

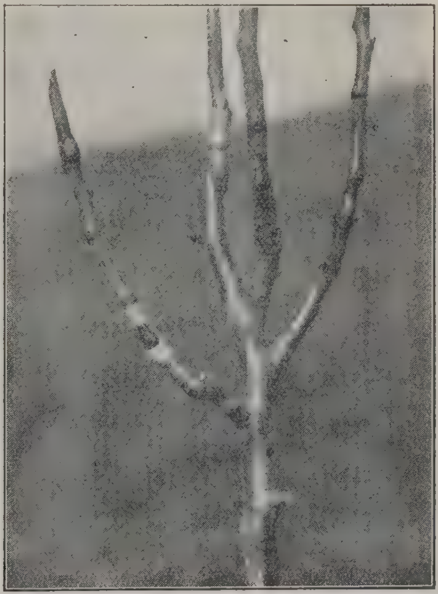


Fig. 13.—Budding. Young Pear tree reworked by budding process, showing buds inserted.

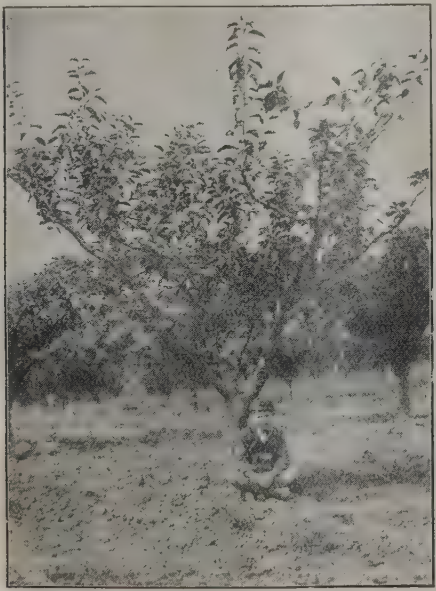


Fig 12.—Same tree as in Fig. 11—six months later. All growths, except those required, have been suppressed, and buds of the new variety inserted close against main limbs.

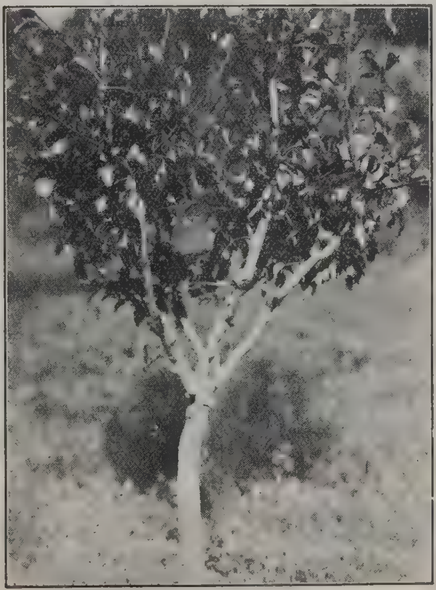


Fig. 14.—Budding. Young Pear tree showing two years' growth from buds.

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COME TO HOBART

Grand Australasian Fruit Exhibition, Hobart, May 5 to 9, 1930.

Australian Conference of Fruitgrowers Will be Held in Conjunction.

COMPLETE PREPARATIONS have been made for the Grand Australasian Fruit Exhibition at Hobart, which opens in the week commencing May 5, under the auspices of the Tasmanian Farmers' Stockowners, and Orchardists' Association.

The exhibition promises to be the most comprehensive exposition of fruit yet attempted in the southern hemisphere. The schedule of prizes provides for £1,100 in cash prizes, including 18 championship cups and trophies, and covers no less than 366 classes. Provision has been made for all kinds of fruit and fruit products produced in the Commonwealth and New Zealand.

The exhibition will be held in Messrs. A. G. Webster & Son Ltd. spacious showroom, Liverpool-street, Hobart, Tasmania, gratuitously loaned for the purpose, which has a floor space of nearly an acre, and will be brilliantly iluminated by a fine display of electric light donated by the Hydro-Electric Department of Tasmania. Each evening the popular Derwent Concert Band, specially engaged, under the leadership of Lieut. T. W. Hopkins, will render a high-class programme of music.

The fact that the Australian Conference of Fruitgrowers will be held at the same time adds interest to the proceedings. It is interesting to note that at the Hobart Fruit Exhibition in 1914 the prize money totalled £400, in 1920 £500, 1930 £1,100.

There will be on exhibition collections of fruits from the several State experimental orchards, comprising many hundreds of varieties of Apples and Pears, which will be especially interesting, although many may have very little commercial value. In addition to colder climate fruits, there will be exhibits of tropical fruits, many of which are seldom seen so far south as Tasmania.

Front Row (left to right)—Messrs. Dan Wuille & Co. Ltd. (London) Trophy; Messrs. L. Susman & Co. (Hobart) Trophy; Hon. L. M. Shoobridge, M.L.C. (Hobart) Trophy.

First Row on Table (left to right)—Neptune Oil Coy. Ltd. (Melbourne) Cup; Tasmanian Orchardists' and Producers' Association Trophy; Destruxol Corporation of Los Angeles, Cal., U.S.A., Cup; Vita-Lick Limited (Sydney Cup.

Second Row on Table (left to right)—Messrs. F. A. Flint Pty. Ltd. (Hobart) Cup; Barney Springer (London) Cup; Orient Steam Navigation Coy. (London) Cup; Burton-Page Coy., Wisconsin, U.S.A., Cup.

Third Row on Table (left to right)—C. J. Goodman (Bairnsdale, Vic.) Cup; Colonial Sugar Refining Coy. (Sydney) Cup; H. G. Colombie (Melbourne) Championship Cup; T. S. Johnson & Coy. (Liverpool, Eng.) Cup.

Back Row on Table (left to right)—Secretary's Cup; Electrolytic Zinc Coy. of Aust. Ltd. (Hobart) Cup; Port of Manchester (Capt. W. J. Wade, Sydney) Cup.

Officials (left to right)—Mr. A. J. Honey, Secretary and Organiser; Mr. Luke Williams, Treasurer; Hon. J. C. McPhee (Premier of Tasmania) Vice-Patron; Hon. L. M. Shoobridge, M.L.C., President; Alderman J. Soundy, M.H.A. (Mayor of Hobart), Vice-President; Mr. P. H. Thomas, Chief Horticultural Expert.

Programme.

Monday, May 5.

All-day trip to be arranged for visitors.

8 p.m.—Australian Conference of Fruitgrowers assemble.

9 p.m.—Official opening by the Hon. the Premier.

Tuesday, May 6.

All-day judging of exhibits.

8 p.m.—Australian Conference of Fruitgrowers resumes.

Wednesday, May 7.

2 p.m.—Exhibition open to public.

3 p.m.—Official opening by His Excellency the Governor Sir James O'Grady, K.C.M.G.

8 p.m.—Derwent Concert Band in attendance at Exhibition. Exhibition remains open till 10 p.m.

Thursday, May 8.

Exhibition open from 10 a.m. to 10 p.m.

All-day trip to be arranged for visitors.

8 p.m.—Australian Conference of Fruitgrowers resumes, and meeting of Australasian Pomological Committee.

Friday, May 9.

10 a.m.—Australian Conference of Fruitgrowers and meeting of Pomological Committee resumes if necessary. Otherwise short trips to be arranged.

Exhibition open from 10 a.m. to 10 p.m.

On Saturday, May 10, there will be a social gathering at 8 p.m. Sunday free, and on Monday, May 12, at 8.50 a.m., visitors may leave by special boat train for Launceston, thence to Melbourne.

The State Commissioner for Railways has kindly consented to issue excursion tickets in connection with the Exhibition, and the mainland States have been communicated with to assist delegates, exhibitors and visitors by the issue of cheap fares to the port of embarkation.

Entries close on April 22. No late entries will be received, and copies of the schedule of prizes may be obtained form any Department of Agriculture in the several States and New Zealand, and also from the Secretary (Mr. A. J. Honey), Bursary House, Hobart.

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Most of the better-known scenic resorts can be reached from Hobart by day-trip, while the vast majority of the places of interest in the State are readily accessible. Port Arthur, with its ruins and its splendid scenery; Eaglehawk Neck, with Tasman's Arch, the Famous Blowhole, and Tessellated Pavement; National Park, where is to be found the glory of Russell Falls; New Norfolk, of soft and peaceful beauty; the Huon, where apple orchards smile from countless valleys; Mt. Wellington and the Springs, beneath which spreads a panorama unrivalled in Australia; Mt. Nelson, guardian hill of lovely Derwent Harbour; Lindisfarne, happy suburb nestling on beautiful bays; South Arm, of picturesque charm, and Clifton Beach, where surfers revel; Brown's River, of bathing delight; Collinsvale, Bridgewater, Fern Tree, and D'Entrecasteaux Channel, all these and many more are to be visited easily by day-trip with Hobart as Headquarters.

River trips, mountain trips, orchard trips, harbour trips,, historical trips, bush trips, trips of all kinds imaginable by river, train, and road, await the tourist.

The very best hotel and boarding house accommodation is available in the City and Suburbs at reasonable terms.

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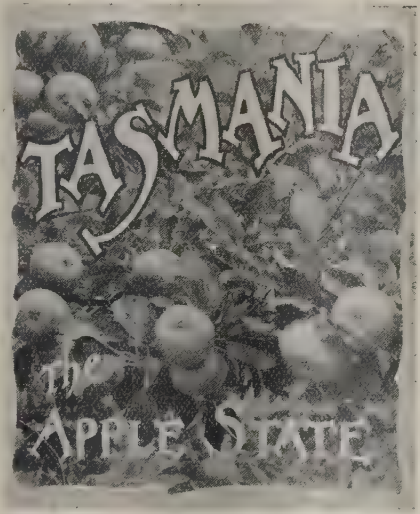

A Hearty Invitation to All

WE SEND GREETINGS to every Fruitgrower in Australia and New Zealand, and a cordial invitation to come and see the Big National Fruit Exposition, to be held in Hobart on 7th, 8th and 9th May. We expect a display of Fruits from all parts of Australia and New Zealand, including large educational collections from the various State Experimental Orchards. At the same time the 1930 Session of the Australian Conference of Fruitgrowers will be held.

Don't miss seeing the most comprehensive and instructive display of orchard produce ever brought together in the Southern Hemisphere. Eleven Hundred Pounds (£1,100) offered in Prizes, and Cups, donations for same having been received from Great Britain, U.S.A., Germany, and all parts of Australia.

We will be so glad to see you; do make an effort to be present, you will be sorry if you miss it. A HEARTY WELCOME AWAITS YOU WHEN YOU ARRIVE IN HOBART. With best wishes

From yours sincerely,
L. M. SHOOBRIDGE,
President.

PUBLIC TRUSTEE OF TASMANIA.

An important office is that of the Public Trustee of Tasmania. This public trust office was created for the benefit of the whole community, and deals with deceased persons' estates, testate or intestate. The office is conducted in perpetuity, and is guaranteed by the State. Investments are also conducted through this office under Government guarantee as to capital and interest.

Over 200 wills are dealt with every year through the Public Trustee. The affairs of infants and minors are attended to, where instructed; advances are made to dependents. Benefit and relief funds are also operated through the Public Trustee. The office is not run for a profit; fees are fixed by regulation. Full details are available on application.

TASMANIA FOR TOURISTS.

Tasmania has unique attractions for tourists. All Tasmania is beautiful, rugged mountains, peaceful valleys, and hamlets, noble rivers, majestic waterfalls. Rich in historic associations and scenic beauty, Tasmania is the playground of Australia. There are facilities for all sports and recreation; the climate is bracing and health-giving. Full details are obtainable from the City Council.

FRUIT SHIPMENTS OVERSEAS, 1930.

March 19, "Mongolia," London; 19th, "Hobson's Bay," Hull, London; —, "Natia," Rotterdam, Hamburg; 25th, "Ceramic," Liverpool, London; 27th, "Oronsay," London; —, "Trojanstar," Manchester, Liverpool, London; April 1, "Port Alma," Hull, Hamburg; 2nd, "Narkunda," London; 2nd, "Balranald," London; 5th, "Fordsdale," Hull, London, Hamburg; 10th, "Orontes," London; 12th, "Ballarat," London; 15th, "Canonesa," Bremen, Hamburg, Liverpool, Hull; 16th, "Esperance Bay," Hull, London; 16th, "Cathay," London; 18th, "Stirlingshire," Liverpool; 19th, "Ulysses," Liverpool; 24th, "Orama," London; 29th, "Mooltan," London; 29th, "Jervis Bay," Hull, London; May 7, "Anchises," Liverpool; —, "Port Wellington," Hamburg, London, Hull; 10th, "Bendigo," London; 14th, "Chitral," London; 16th, "Themistocles," Liverpool, London; 27th, "Largs Bay," Hull, London; 27th, "Maloja," London.

Additional Steamers.

Subject to sufficient support being forthcoming the following steamers will be available to load at Hobart:—

June 1, "Baradine," London; 9th, "Ascanius," Liverpool; 10th, "Buteshire," Manchester, Liverpool; 12th, "Moldavia," London.

TASMANIAN BLACK CURRANTS.

Victorian Railways Render Good Service in Assisting Distribution.

WHEN the Tasmanian State Fruit Advisory Board approached the Victorian Railways Commissioners to assist in the disposal of the surplus Black Currant crop, the reply was prompt and courteous. Yes, every assistance would be rendered.

Arrangements were made ahead in good time to enable the programme to be efficiently organised.

A neat pamphlet was issued, giving Black Currant recipes. Railway station-masters booked orders. In addition, the Black Currants were sent in truck loads and sold at railway sidings.

The berries were packed in 12 lb. boxes, and prices for single boxes were: Melbourne 6/-, suburbs 6/6, country 7/-.

Several thousand boxes of Black Currants were handled in this way to the satisfaction of all concerned.

Drink
"MERCURY"
Sparkling Cider

Made in .
Tasmania .
by Tasmanians
from . .
Tasmania's
Choicest .
Apples . .

Tasmanian
Sparkling Cider
MERCURY
Hobart

The Tasmanian Cider Co.
LIMITED
Cr. Davey and Murray Sts., Hobart
'Phone 3260

A special vote of thangs to the Railway Commission was carried at a recent meeting of Tasmanian Fruit Advisory Board.

Mr. F. Cave, of 50 William-street, Melbourne, Secretary of the Melbourne Committee of the Tasmanian State Fruit Advisory Board, paid good attention to all matters relating to the distribution of the Black Currants.

IMPERIAL FRUIT SHOW.

Australian and New Zealand Apples May Compete in Present Export Season.

Judging at Covent Garden in May.

THE Imperial Fruit Show Committee is offering special facilities to Apple growers in the Southern Hemisphere to compete in the Empire Championship.

The Imperial Fruit Show has always been held in the English autumn as being the most suitable for fresh fruits grown in Great Britain and Canada ,and it has therefore been impossible for Australian, New Zealand and South African growers to participate as far as Apples are concerned.

THE
PUBLIC TRUST OFFICE OF TASMANIA

Have You Made Your WILL?

Why not Consult the PUBLIC TRUSTEE, HOBART?
Deals with Deceased Persons' Estates, either WITH or WITHOUT a WILL

PUBLIC TRUSTEE
BURSARY HOUSE, ELIZABETH STREET, HOBART
State Guaranteed *Telephone 5526*
SECURITY - ECONOMY - PROMPTNESS

The Autumn Show this year is to be held in Leicester, from October 24 to November 1, but in order to allow growers in the Southern Hemisphere to compete, a Spring Section has been provided. It is proposed to judge Australian and New Zealand entries during the second or third week in May, at Covent Garden, and the score cards put away until the Show at the end of October, when the Canadian and English Apples would be judged and the prizes awarded in accordance with the points on the score card.

Growers are urged to enter in the classes provided, because, apart from winning prizes, by entering their fruit they are helping to advertise Australian and New Zealand Apples during the height of their season in Great Britain.

Two sections are provided: (a) British Empire section; open to any grower or exporter in the British Empire; 10 boxes dessert Apples, first prize £50, second £20, third £10, and similar prizes for 10 boxes culinary Apples, entry fee £2.

(b) Overseas Section: Open to growers, exporters, etc., in Australia, New Zealand, and South Africa; five boxes any dessert Apple. Prizes, £10, £5, and £2, and similar prizes for five boxes of any culinary Apple. Entry fee, 10/-.

Those desiring to compete should get into touch at once with the Secretary, Commonwealth Department of Markets, 527 Collins-street, Melbourne, or Mr. J. M. Ward, Superintendent of Horticulture, 605 Flinders-street, Melbourne.

South Australian growers should enter through Mr. G. A. W. Pope, Government Produce Department, Adelaide.

Citrus growers can, of course, compete in the prizes for Oranges at the Show at Leicester, in October.

SEED AND PLANT CATALOGUE.

An interesting catalogue of flower seeds and seedlings, bulbs, corms, tubers, vegetable seeds, shrubs, trees, etc., is to hand from Gill & Searle Pty. Ltd., 73 Elizabeth-street, Melbourne. Flowers include:—Aquilegia, Anemone, Antirrhinum, Balsam, Chrysanthemum, Cineraria, Cosmos, Dahlia, Delphinium, Larkspur, Pansy, Poppy, Stock, Sweet Peas, Zinnia, etc. There is also a list of Gladioli. There are color plates of Roggli's giant Pansies, Larkspur Tall Rocket, Ranunculus, Aquilegia, Delphinium Grendon Giant Hybrids.

Horticultural sundries are illustrated, and much valuable information is included. Copies are available, free, on early application.

Codlin Moth Control.

Efficiency of Sprays. Value of Lures.

EXPERIMENTS designed and controlled by Mr. A. A. Hammond, of the Department of Agriculture, have been conducted this season on the orchard of Mr. T. H. Petty, Templestowe, Victoria, to prevent damage by codlin moth. Experiments have been conducted on practical lines, and show that less than one Apple in 100 has been damaged. Manufacturers and representatives of various brands of spray materials marketed in Victoria for control of codlin moth, were invited to take part. Lots were drawn to determine rows of trees to be allotted to each variety of spray. In the test no trees received more than six sprays and some received only five. The first, the calyx spray, consisted of arsenate of lead, either in paste or powder form. Paste was applied in the proportion of five lbs. of arsenate of lead to 80 gallons of water, and powder 2½ lbs. to 80 gallons of water. Other applications consisted of arsenate of lead alone, or in combination with oil.

In most cases four cover sprays of oil in combination followed the calyx spray. After the first application, further cover sprays were given at intervals of about three weeks. Application was made at a pressure of 325 lbs. to the square inch. Oils used were emulsified in the proportion of one gallon to 40 gallons of water.

Moth lures and temperature records assisted greatly in the experiments. The lures consisted of one part of molasses to 16 parts of water, to which about two tablespoonsful of Apple juice were added to each two gallons of mixture. The lures were changed every ten days.

The number of moths trapped was counted daily. The thermometers which were suspended from a tree, showed that when the temperature exceeded 60 deg. F. there was a greater number of pests about.

During the experiments considerably more than 1,000 moths were trapped.

Throughout the experiments, all Apples which had fallen were collected and counted, and will be included in the final count which is now being made.

There was practically no variation in the relative efficiency of the different sprays used. All showed effective control—about one per cent. of grub damage; there were, however, noticeable differences in the appearance of the fruit as regards spray residue. Trees sprayed with arsenate of lead twice and followed by cover sprays of Volck, in combination, produced well-colored fruit without traces of spray marks.

Complete details in connection with these experiments which are on similar lines to those being conducted at Harcourt are being prepared by the Department and will be published in a later issue.

IN THE GARDEN OF EDEN.

How Many Apples Did Adam and Eve Eat?

HOW MANY APPLES did Adam Eve eat in the Garden of Eden?

Did you think it was just one Apple?

You see, Eve 8 and Adam 2 (Eve ate and Adam too). This matter was recently discussed by a number of fruitgrowers.

Fred Vear says Eve 8 and Adam 8 (total 16). C. H. Ragless, of Eden, South Australia, does not agree. He believes Eve 8 and Adam 8 2, total 90. As he comes from Eden, Mr. Ragless is quite sure of his figures. Hon. L. M. Shoobridge, of Tasmania, thinks both are wrong, for Eve 8 1 and Adam 8 1 2, total 893. Col. Herrod, of N.S.W., goes one better. He says Eve 8 1 4 herself and Adam 8 1 2 4 Eve, total 8,938. Owen Sparks, of Western Australia, is sure that if the Eden quality were as high as that of Bridgetown, it would be easy to understand why Eve 8 1 4 2 know how it tasted, and Adam 2 8 1 4 2 see what it would be like, total 36,284. Bill Ranger, of Queensland, who knows the quality they grow at Stanthorpe, understands that Eve 8 1 4 2 and Adam 2 8 2 4 2 2 have a share in the ruin, total 290,564. Well that was a good total of Apples in order to invent trousers!

But Jim Parkes, previously of South Australia, and now of Victoria, says that had they been Oranges in the Garden of Eden, he could have understood the angels being tempted as well as dear old Adam and Eve.

Soil Research in Relation to the Citrus Industry.

(By Professor J. A. Prescott, of the Waite Agricultural Research Institute, Adelaide.)

An Address Delivered Before the Australian Citrus Convention.

THE present Commonwealth organisation relating to soil research is the development from a start made two years ago to study the soils and soil problems of the irrigation settlements in the Murray Valley. The work is as yet in its infancy, but it may be claimed that a substantial start has been made in one aspect of the work, namely, that of soil survey. The areas so far accurately mapped and completed include Block E and Chaffey, at Renmark, Woorinen in the Swan Hill district, and the swamps of the Lower Murray. Survey work is at present in progress at Renmark in order to complete the whole settlement this year, while the projects for the immediate future include Lake Albert at the mouth of the Murray. In addition, outside the irrigated areas, a start has been made in the South East of South Australia, in co-operation with the Department of Agriculture, and it is hoped to organise a survey of the Apple-growing districts of Tasmania as soon as circumstances permit. In the Murrumbidgee irrigation area the soils selected for immediate study are of the heavy crabholey type suitable for rice cultivation. Until the present organisation developed, no serious survey work of this character had been attempted in Australia, and it was therefore necessary to pioneer the latest methods, and I may say that we have every right to be proud of the maps so far published under the signature of Mr. Taylor, our senior soil surveyor, which are equal to anything that has so far been produced in the Empire.

Purpose of Survey.

The purpose of the survey is to define the areas and boundaries of the different soil types to be met with in an irrigation or other settlement and to examine in detail in the laboratory their physical and chemical properties.

Until such a survey was completed it was impossible to gain any clear idea of the whole problem of Block E for example. We now know, however, that it is not enough to rely on the native vegetation alone as an index of fertility, but that a box flat, uniform perhaps in general appearance to the ordinary settler or surveyor, can be made up of a patchwork of soils of very variable character, some fertile and some infertile. This does not mean **that native timber** is of no value as a guide to fertility, but that in many cases the difference could only be adequately followed up by a skilled botanical worker. A striking feature of the work so far done at Renmark and Woorinen is the variability of the soil even within a single block, and it is obvious that any development that takes place in Australia in the direction of closer settlement should be preceded by careful survey.

The losses written off on Block E and Chaffey to date are £140,000, while the pioneer soil survey would have cost £1,500.

Insurance Fund Needed.

I should like to see a sum representing say one-half to one per cent. of developmental costs placed to one side for the cost of survey, as an insurance fund in all closer settlement. It is impossible for the present organisations, particularly State organisations, to carry out the work that is waiting to be done with the limited funds at their disposal except by some such means, and it would be infinitely better to lose his small premium at the start rather than to lose the whole of subsequent developmental costs as is happening in more than one settlement at the present time.

Additional Work.

In addition to the survey work proper it is hoped to follow up the general conditions including topography, drainage and seepage problems, of individual settlements such as Cadell and Tresco where excellent work has already been carried out by Mr. Read of the Victorian Department.

The important **Mildura-Wentwort area** will inevitably demand attention, but it is essential to go slow in new work and to train the men required. In the meanwhile, preliminary air surveys are likely to be made by the Air Force, such a photographic survey having proved very valuable in the case of our Renmark work.

Nine Types of Soil.

So far, nine soil types, with additional sub-types, have been fully described, and each type will respond quite differently to watering. Type 1 is the familiar red sand ridge country carrying pine, belah, bullock bush and hop bush, probably the most important type from the citrus point of view. From the nature of the settlements so far examined, vines have naturally claimed our attention, but citrus soils will probably become more important as our surveys progress.

OF THE FACTORS AFFECTING FERTILITY, the most important appear to be physical texture, the presence of salt, the reaction of the soil, and the relative poverty in plant food, particularly in nitrogen and phosphoric acid, this being placed last, not because it is least important, but because it is the most easily remedied. These fertility problems will demand careful study in the laboratory and in the field; fortunately the Division is very closely related to the research stations at Griffith and Merbein, and you are to learn something of the citrus work at Griffith from Mr. West. The physical texture of the soil governs the irrigation regime and the suitability of the soil for various crops. It is itself governed by the relative proportions of coarse sand, fine sand, silt, and clay, and is further modified by the chemical nature of the clay and the quantity of organic matter. The Mallee soils in general form a continuous series containing sand fractions and clay, but small amounts of silt; the Type 1 soils may contain up to 95 per cent. of coarse and fine sand while the more loamy wheat soils contain up to 30 per cent. of clay, and if the Wimmera soils are included these form the other extreme of the same series with a still higher proportion of clay.

Alluvial Soils.

The alluvial soils appear to group themselves into the series, the recent terraces typified by the heavy polygonum flats, and the Swan Hill flats and the ancient terraces typified by Renmark. These soils vary enormously in texture, the polygonum soils being particularly heavy, while the type 3 Renmark soils are light and particularly fertile.

The alluvial soils vary importantly in another respect, that of reaction. The familiar simple concept of acid or alkaline soils has given way in recent years to a much more definite classification, and we are able to place soils in quite a wide range of groups defined by the hydrogenion scale of acidity or pH scale where pH 4 represents the acid limit, pH 7 the neutral point, and pH 10 the alkaline limit. Many Mallee soils approach the latter, while the swamp soils of the lower river may be very acid indeed. The optimum point for most crops appears to be just on the acid side of the neutral, say pH 6 to pH 7, and the **best citrus in Australia** seems to be grown on alluvial soils round about this reaction.

Soil under conditions of high rainfall or heavy leaching are the most acid, and a somewhat acid reaction is frequently shown by the recent alluvial soils, as at Speewa, and on some polygonum flats. The soils of the ancient terraces have had time to weather into equilibrium with the low rainfall condition of the present climate and they are therefore usually quite alkaline, rich in lime and frequently also in gypsum.

The reaction of the soil is difficult to control in a cheap enough way, nor do we yet know whether it is practicable to reduce the alkalinity of the worst of these soils. The use of lime on the more acid soils at Speewa and Murray appears to be much more practicable.

The **salt and seepage problem** is one of the most important on the river. The first point to be realised is that the Mallee soils are in general, naturally rich in salt. In some parts, particularly in Western Australia, and to some extent in Yorke's Peninsula they are sufficiently saline to interfere with the growing of wheat. Recent work by Mr. Thomas at the Merbein station has shown that in virgin soil of a type known to develop salt troubles after a few years irrigation, there is a most remarkable distribution of salt, patchy with regard both to horizontal and to vertical distribution. It is hoped to lay out a vineyard on this area and to watch the movements of the salt.

In this connection the recent work by Mr. Lyon on the distribution and quantities of irrigation water in the Mildura district is particularly significant, and there is reason to believe that many settlements are using nearly twice as much water as is good for their land.

In the matter of **irrigation research,** that is the quantity and the mode of application of water to the land, much remains to be done: each soil type demands special treatment and it is becoming obvious that most of our troubles are due to attempting to irrigate together two or more soils of entirely different irrigation requirements. Type 1 soil at Renmark contains about a half per cent. of total salts in its virgin condition (about 23 tons per acre to 3 feet), and it is obvious that if seepage water carries this salt and accumulates it in any particular direction considerable quantities of salt may accumulate with disastrous consequences to the individual blocker or even to the settlement as a whole. It is estimated that at Cadell in the last 4½ years, 32,000 tons of salt have been removed in the drainage waters, while there is little need to remind you of the tragedies of Tresco and Tresco West.

Salt Removal.

THE ONLY WAY to handle salt effectively is to remove it altogether, but no one yet seems to have evolved a completely successful way of doing the work. It would be much better if the salt could be removed by leaching and drainage before planting because there is then little danger of its return. Accepting the inevitable presence of salts in our virgin soils, the alternative calls for special care in irrigation practice.

Associated with salinity, the "white alkali" of the American irrigators, there is the **dreaded "black alkali,"** or sodium carbonate. So far we have not met any undoubted cases of true sodium carbonate occurrence, and it is my impression that black alkali is not a feature of our arid soils. An allied condition exists, however, which is dependent on the nature of the clay in our soils. The surface of the finest clay particles in the soil is active with a number of bases: lime, magnesia, soda, and potash. The latter is always very low, and for a good soil lime usually makes up 80 to 90 per cent. of these bases—if the total bases are low as a result of heavy leaching, the soil is very acid; if the total bases are high, the soil is very alkaline. In our soils magnesia appears to be as important as lime, and on occasion soda becomes important. In some of the Californian alkali soils the clay is almost entirely a soda, but so far the worst we have met in Australia has a proportion of 50 per cent. soda as against 18 per cent. of lime.

Clay Soils and Gypsum.

In the Renmark soils the fertility is in fact strictly dependent on the proportion of lime associated with the clay, the high lime clays being the most fertile while the low lime clays are the least fertile. The soda clays are particularly intractable and every effort should be made to improve their texture. Gypsum is usually recommended, but further research on this subject is still needed for there are many classical instances where gypsum has failed to produce the desired result.

In connection with plant foods little remains to be said. The surveys and associated chemical work will simplify very materially the work of the district instructors. Chemical analyses are now recorded not on casual samples but on type samples thoroughly representative of the area which is being studied, so that future analytical work will have a permanent standard of reference. The recommendations for fertilisers is complicated by the particular habit of the crop itself. The work at Berri and in the Murrumbidgee area demonstrates without a doubt that citrus responds to nitrogenous fertilisers and not to phosphates, while on the same soil wheat responds to phosphate and not to nitrogen. It is obvious that chemical analysis must be followed up by field experiment, and the task of the agricultural chemist does not cease in the laboratory, but most inevitably carry him to the field where he is in closer contact with the plant itself and with his colleagues, the grower.

In reply to a question by Capt. Halhed, Prof. Prescott emphasised the value of nitrogen for improving citrus crops.

Mr. J. Allen stated that on a citrus grove in South Australia, 2 cwt. of sulphur had benefitted the crop. What was the effect of sulphur?

Prof. Prescott said that certain bacteria in the soil thrived on sulphur. He was astonished that more was not used. It was often more effective than gypsum.

In reply to a question by Mr. F. H. Metters regarding the value of organic manures, Prof. Prescott said that some heavy soils could be improved by using organic manure. This, however, was difficult to obtain, and artificial manure was expensive. Green manure put body into the soil.

Mr. Allen enquired as to the value of ploughing in vine prunings.

Prof. Prescott said this was done in many districts. There was a danger of introducing disease by so doing. Further, the vine prunings broke down quickly, and he considered it was a costly way of adding organic manure.

New South Wales News.

The Productive Kentucky District. ∴ Apples, Pears and Stone Fruit.

THE KENTUCKY DISTRICT came into prominence as a fruit-growing centre when the returned soldiers' settlement was first started in 1918. Further plantings were made during 1919, 1920, and completed during the year 1922. In all, 80 orchard blocks of approximately 15 acres each were established. There are now seventy-five families in occupation on the area.

Outside the orchards established for home use on the sheep station properties in the district, the only commercial planting made earlier than 1918 was that by the late Mr. E. G. Burley, schoolmaster of Kentucky. He had about six acres of Cherry trees in bearing, which was noted by the late District Surveyor Thomas, of Armidale, and through whose efforts a survey was made as to the possibilities of establishing commercial orchard holdings for soldier settlement. In addition to Mr. Burley's orchard, now twenty acres in extent, Mr. H. M. Croft established a twenty-acre orchard near to the Kentucky railway station.

Apples, Pears and Stone Fruit.

Taking the Kentucky district as a whole, the plantings of fruit trees for commercial purposes are approximately as follows: 75,000 Apple trees, 25,000 Pear trees, 5,000 Cherry trees, and 2,000 stone fruits, including chiefly Apricots, Peaches, and Plums.

Of the Apples, the Granny Smith, Jonathan, Tasma, and Gravensteins predominate, with good plantings of Sturmer, Delicious, Rome Beauty, and Five Crown to give variety and bridge over the ripening periods of the main crops.

Of Pears, the Williams Bon Chretien, Packham's Triumph and Winter Cole are the more numerous, with the Winter Nelis, Josephine and Beurre Bosc in sufficient quantities to lend variety for market purposes.

The main Cherry plantings are St. Margaret, Florence, Biggareau, Napoleon and Early Lyons, with Quigdorff, Bedford and other varieties in smaller plantings. The whole of the orchards have now reached the bearing age. Returns have been influenced by the season's, which during the past three years have proved unfavorable to best results in this district. To a minor extent, replacements and working over some varieties have operated in this direction.

Good Crops Harvested.

During the season 1928, 78,000 bushels of Apples and 16,000 bushels of Pears were railed to the Brisbane and Sydney markets, chiefly; while during 1929, owing to serious damage from late frosts and later by hailstorms, during the months of December and January, the crop marketed was 37,000 bushels Apples and 17,000 bushels Pears.

The official estimate of the crop prospects for 1930 has just been completed, and, taking all fruit from trees at the bearing age in the district, it is expected that approximately 98,000 bushels Apples and 28,000 bushels of Pears will be marketed, subject to weather conditions proving normal. At the time of writing, the district is suffering from an acute dry spell, and the fruit crops are beginning to show the effect of the adverse weather conditions.

Co-operative Marketing.

Along with the splendid progress of the orchards, the constructive work of co-operative marketing by the Kentucky Rural Co-operative Society Limited merits a short review. Established during 1922, the Society has carried on quietly, handicapped, firstly, by small crops owing to the orchards being in the non-productive stage, and again during the past few seasons by adverse weather conditions, but still making progress each year, and, what is even better, proving the loyality of its foundation members.

The membership at present is twenty-four. The fruit graded, packed, and marketed for members during 1929 was 24,000 bushels, and arrangements have been finalised to put through 45,000 bushels for 1930.

A start was made with some choice quality Gravensteins on January 13, and it is hoped to keep the shed going at full capacity until the month of July. In addition to handling the members' fruit, a considerable quantity is graded and packed for outside people.

During past years the shed has been run exclusively by a board of directors, but for 1930 a contract has been entered into with the Producers' Distributing Society Ltd. to grade, pack and supply of all necessary materials, the Kentucky Rural Co-operative Society supplying shed accommodation, plant, etc.

The convenience of the Society was met during the early years by a galvanised iron shed with a floor of 60ft. x 30ft., erected at the Kentucky railway station. Early in March, 1928, a new weatherboard building, erected on up-to-date packing house lines, with a floor space of 80ft. x 60ft., and costing £3,149, was opened at a railway siding, Kentucky South, put in, in the centre of the returned soldiers' settlement.

This season it has been found necessary to put on an addition with a floor space of 40ft. x 20ft., to hold 20,000 cases in shook. In addition to the large "Lightning" grader already operating in the packing house, a "Cutler" power grader is being installed this season.

The annual general meeting was held recently, and the following directors elected:—C. B. Colless (Chairman), W. W. Challis (Secretary), J. A. Burton, A. C. Monk.

The Society anticipates that a large quantity of fruit will be sold through the N.S.W. Wholesale Distributors' Association on country orders, and that shipments to the East will be made of certain late varieties of Apples. It is also hoped to finalise arrangements for the sale of portion of the fruit crops to the N.S.W. Government railways refreshment rooms.

The matter of cool stores is again deferred, but it is intended in the near future to go on with the proposition. The season 1930 will also see a new and distinctive case label being used on the Society's fruit cases.

Buying Supplies Co-operatively.

The progress of the Kentucky district would not be fully told without mention being made of the good work of the Kentucky branch of the N.S.W. Fruitgrowers' Federation. Thirty-five members have organised with a view to co-operative buying of the necessary packing materials and cases, together with all orchard requisites and supplies, and to forward all fruit to the markets in full truck lots. During 1929, 22,000 cases were purchased by the branch. The gross turnover was £3,000. The rebate in freights to members totalled approximately £200, and while all commodities were secured for members at greatly reduced prices, the branch closed the year with a credit balance of £90.

Agencies are held for all orchard and packing shed requisites, including the "Lightning" grader and power spray outfit. For those members wishing to go in for co-operative grading and packing of their fruit crops, ample shed space has been secured, also a system of carting by motor lorry, including space in a despatch shed at the Kentucky railway station, thus facilitating the loading and despatch of the fruit in full truck lots. For the 1930 season, the branch has placed an order for 40,000 cases, with the option of a further 20,000, or part thereof, if required.

The success of the Kentucky orchards is due to the spirit of

goodwill and hearty co-operation

prevailing between the orchardists and the various supervising bodies, especially the New South Wales Department of Lands. Of the 75 families in occupation of soldiers' group purchases, 71 are held by returned soldiers, of whom 46 are the original occupiers, and a further six have been in occupation since early 1921.

Now that the orchards are in bearing, the healthy, strong growth of the trees and the well-cultivated orchard blocks made the district one of the tourist sights of the New England district. A road starting from Tamworth and running parallel with the Great Northern railway line crosses into the Kentucky group purchase area at Wollun siding, and runs through the orchards for six miles, joining the main Northern road within two miles of the settlement.

During the Christmas holidays many visitors expressed their admiration of the orchards, and also their surprise at the undoubted success of the venture.

The social welfare of the community is well catered for, and among other worthy institutions are the Bush Nursing Home and district Bush Nurse, the Kentucky branch of the Country Women's Association, and two churches.

A live Settlers' Association and the Kentucky Progress Association attend to the civic requirements of the village in the way of good roads and to study beautification schemes.—Wm. Milligan, Kentucky, N.S.W., 14/1/30.

NEW SOUTH WALES.

Fruit Marketing Committee.

NEW MARKETS for Australian fruit in Eastern countries formed the subject of an interesting address by Mr. A. Butcher, of Singapore, before the last meeting of the N.S.W. Fruit Marketing Committee.

Market Construction Abroad.

Mr. J. W. Blick, recently returned from a world tour, then addressed the Committee on the subject of accommodation in the various large fruit markets he had inspected overseas. In view of the reconstruction of our City Markets, this subject is at present of absorbing interest. The markets of Chicago, Covent Garden, Spitalfields and Los Angeles were compared briefly, but most effectively, and outstanding features for conveniences, cool stores, transit, and other matters explained.

Mr. Blick considered that Los Angeles provided to his mind the most ideal pattern on which to base plans

Canadian Standard Cases

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ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

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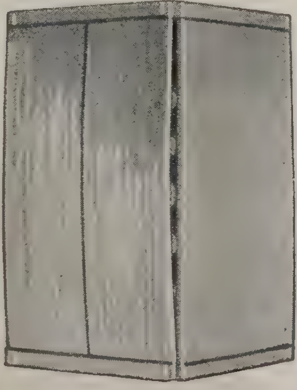

Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

for the new markets. He detailed the very clever ideas which anticipated requirements, even for many years ahead, and also pointed out that each stand there had a small cool store area available. This means that during heavy supplies of fresh fruits, especially when temperatures are high, the bulk of the fruit can be kept in store during selling operations.

Carried to its logical conclusion, gluts can thereby be eliminated, and the markets fed individually by the agents as occasions demand. To the present it has always been possible for speculators to operate with the cool stores, but the general acceptance of the suggested principle should have no such deleterious effects.

Growers must pick their fruit, and the supplies during peak rushes must be heavy. A few unseasonable or wet days in the city most certainly retards free movement of the fruit, and the result has been that failing sale at sacrificial prices enormous quantities have to be destroyed.

After much discussion on this important matter, it was resolved to ask the Minister for Agriculture to suggest to the Civic Commissioners that before commencing with the new scheme, a responsible official should be sent to inspect other markets of recent construction overseas in order that the very latest ideas may be incorporated. The consensus of opinion is that the Comptroller of Assets, Mr. Breden, should be sent. This gentleman retired prior to the discussion, and was not therefore able to advise the Committee regarding such a possibility.

Mr. Blick was suitably thanked for his address.

Commonwealth Fruit Crops.

Mr. C. G. Savage, Director of Horticulture, then gave Commonwealth crop prospects. These indicate heavy general yields with few prospects of a serious glut of any variety. Heavy crops in some States are offset by lighter yields in others, and although citrus fruits promise a record yield, others practically assure a normal supply.

"Apricot Week," instituted during the end of last year, resulted in the clearing of enormous quantities, although much inferior and over-ripe fruit was destroyed. The press were specifically thanked for efforts on behalf of the growers, and it is here worth noting that without this assistance the consequences might have been very serious.

"Householders' Days" have proved highly successful, and several thousands of cases of ripe summer fruits disposed of at very satisfactory prices. The N.S.W. Fruitgrowers' Federation is to be congratulated on the energetic manner in which the scheme was taken up and successfully carried out. Now that the ice has been broken, it is safe to say that the organisation will again function as emergencies arise.

RURAL WORKERS IN N.S.W.

Removed from Scope of Industrial Arbitration Act.

The Young Branch of the Farmers' and Settlers' Association of N.S.W., recently carried a vote of thanks to the Government for removing workers in rural industries from the operations of the N.S.W. Industrial Arbitration Act.

Fruitgrowers and farmers are now at liberty to make their own arrangements as to wages and conditions.

MURRUMBIDGEE IRRIGATION AREAS.

Bananas and Pineapples Desired.

No Bananas or Pineapples are permitted to be imported into the Murrumbidgee Irrigation areas, because of the fear of the importation of fruit fly. As these fruits are deemed non-carriers of the fruit fly, strenuous efforts are being made on the M.I.A. to have the embargo lifted.

A BOOK has been received from Capt. W. J. Wade, 8 Bridge-street, Sydney, representative for Australia and New Zealand of the Port of Manchester. This book is entitled, "The Manchester Markets," and contains a review of the activities of the Manchester Corporation Markets Department.

Information is given on the Smithfield Fruit, Vegetable and Flower Market, the Fruit Auction at Campfield, Wholesale Meat Market and Abattoirs, Smithfield Fish Market, Cold Storage Facilities, Food Inspection in the Markets, etc.

It is stated that the Board of Trade returns of imports and exports show that in the value of merchandise handled, Manchester takes the third place among the ports of the country. It is claimed that few ports have such complete and modern equipment, and the canal is regularly navigated by twin-screw steamers of 15,000 tons dead weight capacity.

VALUABLE RESEARCH WORK.

Three valuable brochures have been received from the Council for Scientific and Industrial Research, as follows:—

No. 14.—The Work of the Division of Economic Botany for the year 1928-29, by B. T. Dickson, B.A., Ph.D.

No. 15.—The Work of the Division of Economic Botany for the year 1928-29, by Dr. R. J. Tillyard, M.A., Sc.D., D.Sc., F.R.S.

No 16—The Work of the Division of Animal Nutrition for the year 1928-29, by Prof. T. Brailsford Robertson, Ph.D., D.Sc.

In the pamphlet No. 14 some of the items dealt with are:—Mould in Sultanas, Leaf-spot of Bananas, Bitter Pit, Associated Diseases of Apples, Spotted Wilt of Tomatoes, Plant Breeding, Noxious Weeds, etc.

Pamphlet No. 15 contains reports regarding Noxious Weeds Research, Orchard and Fruit Pests, Forestry Problems, the Museum and Library, etc.

No. 16 contains a general review. Reports are given of Individual Investigations at the Laboratories of the Division and Work at the Waite Institute, followed by an account of the General Policy of their Field Stations.

Later.—We regret to announce the death of Prof. Brailsford Robertson. This talented scientist will be greatly missed.

SCAB AND MELANOSE IN CITRUS TREES.

Citrus growers who have found that their trees showed signs of infection with scab or melanose, despite the fact that they had been sprayed with Bordeaux mixture, must not assume that the measure is ineffective, observes the Biologist of the N.S.W. Department of Agriculture. Climatic conditions this year were responsible for the flowering of citrus trees over an unusually extended period, making the proportion of fruit protected by spraying proportionately small.

The aim in applying the spray for these diseases should be to make the application as soon as possible after most of the petals have fallen, and in normal seasons this will give good control.

Peaches in Cold Storage.

Successful Experiments by Department of Agriculture.

Smith's Seedling Peaches in Perfect Condition After Five Weeks' Storage.

Export Possibilities.

SOME VERY INTERESTING RESULTS in the cold storage of Peaches have been obtained by Mr. G. B. Tindale, B.Ag.Sc., in his experiments at the Government Cool Stores, Victoria Dock, Melbourne.

Up to the present there has been little or no scientific research work in the cold storage of Peaches. Fruitgrowers at Doncaster and elsewhere have stored Peaches at varying temperatures with inconclusive results.

Mr. Tindale has worked with exactly controlled temperatures and has achieved notable success.

Dessert Peaches of the Smith's Seedling variety—a beautifully flavored Peach, well known in the Doncaster district—were grown and supplied by Mr. H. G. Petty, of Templestowe. They were stored at the following temperatures:—46, 43, 40, 37, 34, 31 degrees Fah. These temperatures were thermostatically controlled in six separate chambers. Two classes of fruit were dealt with—(a) mature and firm; (b) slightly immature, very firm. The best results after five weeks' storage were obtained with the firm, mature fruit held at 31 deg. F. The slightly immature fruit, also at 31 deg. F., came out in perfect condition. Also they held up for several days after removal from cold store, thus making marketing a commercial proposition.

The condition of the fruit held at 31 deg. indicated that it would keep for at least another week in cold store before being removed in marketable condition. This proved to be the case. After six weeks' storage these were still in perfect condition, and remained in marketable condition for some days after removal from store.

From the tests already conducted it would appear to be evident that the cold storage of Peaches is a commercial proposition for the local market; wider possibilities are, of course, opened up with the prospects of export.

Australian fruitgrowers remember with gratitude the visit of Dr. Smith, of the Cambridge University Low Temperature Station. Dr. (then Mr.) Smith, conducted experiments in the cold storage and transport of Apples, and investigated, amongst other things, the brown heart problem. Dr. Smith, however, recognised the possibilities in the cold storage of Peaches. The "Fruit World" at the time drew prominent attention to the fact that this able scientist had expressed the opinion based on his observations in the cold storage of other fruits, that Peaches could be successfully exported in cold storage.

It has now remained for Mr. Tindale to carry this matter forward to another stage, and it is to be earnestly hoped that this whole subject will receive its full measure of support from the growers, the Department of Agriculture, and the scientific workers.

* * *

In the experiments under review it was found that the Smith's Seedling Peaches stored for five weeks at 46 deg. were over-ripe on removal from cold store. At 43 and 40 deg. the fruit was also over-ripe; that stored at 37 came out firm, but flavorless and mealy. At 34, deg. the fruit came out firm and marketable, but not in such perfect condition as that stored at 31 deg., at which temperature the flavor was retained, while the Peaches were luscious. It was also noticed that at temperatures of 37 deg. and above the skin showed innumerable small cracks, while the skin itself rubbed off with the slightest pressure.

The conditions for successful storage appear to be the picking of the fruit when firm, very gentle handling, and immediate storage at 31 deg. F.

Although 31 deg. is below the freezing point for water, this temperature does not freeze the fruit.

Mr. H. G. Petty, of Doncaster, recently made an inspection of the cold stored Peaches and expressed satisfaction with the result.

Further experiments are being conducted with Plums, Pears, Apples, Oranges, Tomatoes, etc.

The Department of Agriculture is to be congratulated for providing the facilities for these experiments and having such a capable and enthusiastic officer as Mr. Tindale to conduct the work. Already the scientific research in cold storage carried out by Mr. Tindale has resulted in substantial economic benefits, and it is certain that greater benefits will yet accrue by a full appreciation of the enterprise.

PEARS FOR N.S.W.

Victorians Must Send in Correct Containers.

The Superintendent of Horticulture for Victoria (Mr. J. M. Ward) is in receipt of a communication from the N.S.W. Department of Agriculture, in which attention is drawn to the fact that growers in the Goulburn Valley, Doncaster, Tyabb and Box Hill districts are forwarding large quantities of Pears to Sydney in containers which do not show the grade marking as prescribed.

Mr. Ward points out that the requirements of the N.S.W. regulations are similar to those of the Fruit and Vegetable Packing Regulations which govern the sale of fruit in Victoria, so that growers and packers should find no difficulty in complying with them.

To obviate trouble at Sydney, growers and fruit merchants should brand cases with the following particulars:—The name and address of the person, firm, or corporation by whom or by which the fruit was packed; the name of the variety; the name of the grade when "Special," "Standard," "Plain," or "D" grade, or when "Factory" grade the words "For Factory Use Only"; and the number or size of the fruit contained in the case.

Failure to brand cases with the particulars mentioned may result in either the re-packing of the fruit at Sydney, or its return to Victoria.

Who Was the Boss?

Psmith: "Who is really the boss in your home?"

Bjones: "Well, of course, Maria assumes command of the children, the servants, the dog, the cat, and the canary. But I can say pretty much what I please to the goldfish."

The Californian Raisin Industry.

The A.D.F.A. System Superior to the "Sun Maid" Organisation.

Marginal Vineyards Producing Under $1\frac{1}{2}$ Tons Per Acre are Going Out of Cultivation.

Australia Must Face Californian Low-cost Production.

(*Report by Mr. P. Malloch, Irymple, Victoria*)

A VERY INTERESTING report on the California Raisin situation was recently presented by Mr. P. Malloch, manager of the Irymple Packing Company. Mr. Malloch went to California specially to study the Raisin position, and his conclusions are full of interest.

Summed up, Mr. Malloch is confident that the principles of the Australian Dried Fruits Association—in which growers, packers, and selling agents are combined—is much to be preferred to the "Sunmaid" organisation, which does its own packing and distribution in competition with other packers and distributors.

In Australia the Raisin industry is organised to secure the best possible results for growers, there being grower control in every organisation, with packers and selling agents cooperating to secure efficiency. In California the grower is in one division and the packer in another. The grower deals with the private packer, or delivers to the Sunmaid Corporation and trusts he will come out best.

Mr. Malloch traces the vicissitudes of the Sunmaid Association and the efforts of the growers to secure effective control. Growers' support had dwindled from 85 per cent. in 1924 to 30 per cent. A recent attempt to secure monopoly had failed by 7 per cent., and Sunmaid was left to carry the burden of finance and overproduction, which should have been borne equally by all the packing interests. In this there was evidence that the A.D.F.A. was on the right lines.

The California Vineyardists' Association is now operating with Mr. D. Conn as manager, the attempt being to organise the trade in table and juice Grapes. With over 900,000 tons of Grapes to handle from 16,000 growers the task is an immense one. Good work has been accomplished, including beneficial legislation.

The California Dried Fruits Association is an organisation set up by commercial packers and Sunmaid as a trade unit. The total trade in Raisins and dried fruits amounts to 600,000 tons per annum. The Association operates as the official inspection branch for all packers. Research work is conducted. The Association is maintained by the commercial interests and from the inspection fees.

Under the

Farm Relief Act

an appropriation of 500,000,000 dollars was made for financing producing industries: maximum allotment to be 150,000,000 dollars for any one year. The sum of 9,000,000 dollars was advanced to the Sunmaid Corporation, who paid growers 3 cents per lb. (£14 per ton) on the 1929 crop. While this amount may not appeal to the Australian producers, it seems to satisfy the Californian grower for the time being. This Farm Relief measure, however, has elements of danger in maintaining a continuance of the problem of overproduction. The only element which would make for the permanent development in the Raisin industry was the reduction of output. Raisin-bearing areas were reduced from 346,223 acres in 1927 to 326,150 acres in 1925, a falling off of 20,073 acres.

Mr. Malloch states that the basic construction of the industry is one of the greatest factors to be contended with. There are 640,000 acres of vines in California in an area of 400 miles long by 50 to 70 miles wide. This tremendous area was a big factor in disorganisation. Of the 16,000 Grape growers, 60 per cent. are stated to be foreigners—Armenians, Chinese, Japanese, Italians, Greeks, Jugo-Slavs, Danes, Swedes, Mexicans, Hindoos, and Russians. The difficulties of organisation of such racial differences can readily be understood.

Of the aforementioned grape-growing area, 326,150 acres are under Raisin production. In 1928, 258,000 tons were produced as follows:—Thompson's Naturals 200,000 tons; Thompson's bleached and golden dehydrated, 15,000 tons; Muscats, 43,000 tons. Owing to frost, the 1929 production was around 160,000 tons.

The Competitive Aspect.

Allowing for normal production of 357,000 tons in the main producing countries of the world, and world consumption at 335,000 tons, it was evident that a reduction in tonnage or an increase in consumption was essential to stability. With cheap labor, California vineyards bearing $1\frac{1}{2}$ tons to the acre would pay cost on 3 cents per lb. (or £14 per ton) nett.

After allowing for costs of packing, export and marketing, Australia would probably have to compete on a basic price of £37 per ton in the U.K. for lowest grade. This would net growers only £20 per ton, which under present costs would result in heavy loss. For higher grade fruit a premium of up to £7 per ton might be looked for. This was limited on account of competition from California dehydrated Sultanas. Due to control measures in the Commonwealth, a further premium of £2 per ton may be calculated. Thus a range in price from £22 to £29 per ton was the maximum that Australian growers might expect if Californian competition only had to be faced. Symrna competition was an additional and obscure factor.

Californian packers were committed to a policy of exploitation of export markets for their surplus, and Australia would have to meet the competition.

One hopeful feature was that vineyards producing less than $1\frac{1}{2}$ tons per acre were going out of cultivation in California. Growers were planting cotton in place of vines, with satisfactory results. Others grew lucerne, and were doing well with dairy herds, pigs and poultry.

Continuing, Mr. Malloch deals in a most interesting fashion in the subject of dehydration, packing shed operations, stem loss, fixing Raisin grades, hire of sweat boxes, and the grub trouble.

The grub trouble is as serious in California as in Australia. Fumigation with hydro-cyanic gas is now most generally practised.

Conclusions.

The low returns received by growers in California during the past few years has forced the industry there to a low cost producing basis.

It is admitted that vineyards producing under $1\frac{1}{2}$ tons to the acre are not likely to succeed, and that such marginal vineyards should go out of cultivation.

We in Australia have to face Californian competition, and are going to have, in future, just as we have now, the problem of the marginal vineyard.

The Californian grower is solving the problem of the marginal area by growing cotton or lucerne, and stocking up with cow, pigs, or poultry.

In Australia we may or may not have the same possibilities, or we may have other opportunities for conversion of our marginal vineyards.

The problem calls for investigation by competent State officers, in conjunction with irrigation officers and growers, and it is suggested that immediate action be taken by the A.D.F.A. in this direction.

In my opinion, the A.D.F.A. and Control Board systems are essential to success in our industry. Californian packers and growers hardly credit the measure of success attained by our industry. A dose of competition with Chinese or Armenian growers, who can live on 60 dollars a year (5/- per week), would soon convince outside growers of the value of existing condions in Australia, and of the extreme necessity for retention of our present controlled marketing policy.

In bulk packing operations there are improvements in machinery which are worthy of adoption, but generally speaking our practices are on a line with those of California. There are possibilities of development in special lines of packing which should be further considered in view of Australian conditions.

In growing, packing and harvesting operations, there should be a closer study of labor standards, with a view to adopting piece work rates, which will give a higher rate of efficiency. The inefficiency of labor is largely due to the failure of employers to measure up the value of work done for money paid.

AUSTRALIAN DRIED FRUIT.

Sales of dried fruit in Great Britain for the 47th week of the season, and ending March 20, represented £12,092, made up of 362 tons. Sultanas averaged £35/14/4 per ton over 234 tons. Currants £34/18/4 per ton on 66 tons, and £23 was the average of 62 tons Lexias.

Shipments of 1930 season's fruit have commenced, and over 1,000 tons of Currants were despatched from Melbourne, Adelaide and Fremantle during last week. Sultanas will be shipped during the next fortnight, when probably 2,000 tons will leave Australia for London, Glasgow, Avonmouth and Liverpool.

AUSTRALIAN DRIED FRUITS.

Season's Prospects Reviewed.

Mr. P. T. Berry, of the Aurora Packing Co., recently pointed out some interesting details connected with the sale of Australian Dried Fruits in England. Despite increased attention, there was still too much irregular packing; out of 242 boxes inspected in London in company with Mr. Caro, there were 13 distinct samples. Investigation proved that this fruit had been packed at night, and this practice would now cease.

Symrna was a greater competitor than California.

In Scotland there was a demand for 28 lb. boxes of choice fruit. More fruit could be sold in the outports of England, but the main difficulty in England, as well as in Canada, was the grub problem. The Showell process was a step in the right direction.

The use of Johnson's dip had improved the standard of the fruit.

Lexias were losing their popularity in England, and he could see no future for this class of fruit there.

With reference to the position for this season, Mr. Berry said he did not think the Currant market would improve above the present rates. For five-Crown Sultanas the price should be good. He would like to see Australian fruit of the same appearance as that from Smyrna. For Lexias he anticipated 45/- cwt.

The Aurora Packing Co. was increasing its capital to £500,000.

Mildura.—At the annual meeting of the Aurora Fruitgrowers' Association, held at Mildura recently, Mr. C. Hall was re-elected Chairman; other members of the Committee were re-elected, also Messrs. T. McIntyre and A. J. Humphries (Coomealla) and R. McKenzie (Curlwaa). A credit balance of £180 was carried forward.

NEW FRUIT DIP.

A NEW DIPPING DEVICE invented by Mr. Leslie Frith, of Waikerie, S.A., has created interest. Instead of the previous system of the dipping buckets and hand spreading on the racks, the new device operates on a counter-balancing system. On a truck 10ft. x 3ft. there are placed six trays, each as wide as a rack. The fruit which it is desired should be dipped comes on to this truck opposite the entrance of the dip container. Each tray, which contains two kerosene tins of fruit, then slides into the dipping tank. After immersion in the dip the process is reversed and the kerosene tins containing the dipped fruit are returned to the truck and the truck, when filled, is taken to the rack and the fruit is spread mechanically without having been touched by hand. The dipping tank contains 120 gallons.

RED CLIFFS CO-OPERATIVE PACKING CO. LTD.

Successful Year.

Dividend of 8 Per Cent. and Bonus of £1 Per Ton.

A DIVIDEND of 8 per cent. on the paid-up capital and a bonus of £1 per ton on the 1929 pack were declared at the annual meeting of the Red Cliffs Co-operative Packing Co. Ltd., held at Mildura on February 20. Mr. F. W. P. Hammet, Chairman of Directors, in his annual report stated that paid-up capital was £22,832/15/-, sundry creditors £36,916, overdraft £6,379.

The assets included land and buildings £9,687; plant and machinery, less depreciation, £13,518; stocks on hand, £10,517; sundry debtors, including advances to growers and trade accounts, £13,190. Fruit accounts (fruit payments in advance), £27,481. The net profit was £9,150, of which the dividend and bonus absorbed £3,737, leaving a credit in the appropriation account (including previous balance) of £10,142.

The Chairman appealed for an increase of capital to cope with the steadily increasing business. All the 1929 Currants had been cleared up, the Overseas Farmers' Co-operative Federation Ltd. had made excellent progress with Sultana sales. The Red Cliffs Co-operative Company's fruit sold at an average price appreciably higher than the average price for the total sales recorded by the Commonwealth Dried Fruits Control Board. Only small shipments of Lexias were sent, and the prices were disappointing. A considerable quantity of Lexias was on hand, and distilleries apparently did not require further supplies. Growers were advised to market Gordos and Waltham as green fruit. The packing charge for the 1930 season will be the same as before, namely, £4/10/- per ton for Sultanas and Lexias and £4/15/- for Currants.

Appreciation was expressed for the satisfactory report.

Soils Must Be Fertilised.

Banking Assistance is Reasonable to Enable Growers to Keep up Soil Fertility.

THE consumption of sulphate of ammonia in Australia during 1929 increased by about 35 per cent., and as indicating the far-reaching effect of the coal trouble in N.S.W., importations of English sulphate of ammonia had to be resorted to. Thus Australian agriculturists used, for the first time, "Nitrogen from the air," the great bulk of the imported sulphate of ammonia having been obtained from Billingham, where Imperial Chemical Industries controls a gigantic plant with a potential output of 750,000 tons of sulphate of ammonia per annum. Of course, the Australian consumption of sulphate of ammonia has been growing at a rate which, even had normal production by the gas works and steel works of Australia been possible, would have necessitated importations.

The most marked increase in consumption was in Queensland, where sugar fertilisers are rich in nitrogen, and where phosphates have not yet been greatly used. Western Australia, too, contributed heavily to the increase, and, in fact, in nearly every State, consumption was increased.

It is generally known that fruitgrowers of Australia, except perhaps in Queensland, are the principal users of sulphate of ammonia, and of the various classes of fruitgrowers, those who devote their energies to the production of citrus fruits, are discovering that nitrogenous fertilisers are the determining factor in successful production. This has been proved by actual experiments at Berri, over a period of eight years, and practical orchardists have confirmed it on their own holdings.

But the citrus growers are not alone in their appreciation of nitrogen, for in nearly every fruitgrowing centre sulphate of ammonia sales are increasing, and in the Murray Valley right through from Victoria to South Australia this is very much the case. With the world's markets for nitrogen so well supplied, fruitgrowers will be justified in looking for a reduction in the price of this plant food.

* * *

BANKING INSTITUTIONS should not lightly decline applications from fruitgrowers for assistance to purchase fertilisers.

No dairy farmer, in times of depression, would cut out the expense of feeding his cows in the hope that he would reduce butter-fat production costs, and there would be little humor discerned in the action of the orchardist who similarly cut down his fertiliser programme on the plea of expense. The crop feeds the stock, but it is the soil which feeds the crop. A rich soil is a better investment than a poor soil, and as the richness wanes through constant cropping, so does the investment become less attractive. Fertilisers must be regarded then as an investment.

Although it was not the intention of those who gave evidence during the Tariff Board enquiry into fertilisers, last year, to unduly "boost" the results they obtained from their use of fertilisers, they proved most conclusively that liberal fertilising pays. There were many protestations perhaps very naturally, that fertilisers were too dear, yet, the men who made these protestations invariably produced figures to show that they believed that fertilisers were an absolute necessity, and that profitable farming and fruitgrowing could not be carried on without them. This was particularly the case in connection with citrus growing in Victoria, where a case was cited of one grower spending as much as 4/8 per tree on a complete fertiliser (one containing phosphoric acid, nitrogen and potash). The growth of the fertiliser industry is further proof of the benefits attending the application of fertilisers to Australian soils, and as the years go on the industry develops.

More than ever, where production costs have to be lowered, the necessity for fertilisers is clearly evident, and while financial institutions must exercise prudence in the granting of credit, any really provident farmer should not be hampered through lack of finance in securing this very necessary means of increasing his capital investment in farm land. In terms of banking, you must "pay in" before you can "draw out," and if we can regard the soil as a sort of bank, which we might call the Bank of fertility, we realise that no matter how great the original deposit (the soil's natural fertility) was, "cheques" (crops), cannot be drawn on it indefinitely. Reimbursements in the shape of fertilisers have to be made annually, once it has been clearly shown that the initial deposit is waning.

Victorian Fruit and Flower Show.

Melbourne Town Hall, April 29, 30.

CONSIDERABLE INTEREST has been aroused amongst growers in connection with the forthcoming fruit and flower show to be held in the Melbourne Town Hall on April 29 and 30 next. The show will be officially opened by His Excellency the Governor Lord Somers.

The schedule provides for competitions in cases, trays, and plates of fruit, also fruit pies, etc.

In the cased fruit sections, a prize of £10/10/- is offered for the best four cases of Apples wrapped and packed for export. A prize of £5/5/- is also offered for the best case of Apples in the show, which will be sent to His Majesty the King.

There are generous prizes for trays of Apples, Pears, Peaches, etc., also for exhibits of Grapes, Plums, Quinces, etc. The Victorian Dried Fruits Board and the Australian Dried Fruits Association are rendering valuable assistance. There will be a charming display of dried fruits.

The Caterers' Association is arranging for competitions for the best Raisin pies and pastry containing Raisins.

A lecture on "Some National Aspects of the Dried Fruits Industry" will be delivered by Mr. J. M. Balfour, Chairman of the Victorian Dried Fruits Board, and a lecture, entitled "Fruit in Relation to Health," by Dr. Geo. E. Payne Philpots, D.D.S.

To arouse interest amongst suburban housewives, there will be competitions for Apple pies, preserved fruits, jellies, etc.

The Emily McPherson College of Domestic Economy is generously putting up a non-competitive display of cookery, demonstrating the uses of fruit, also bottled fruits, etc., etc.

Many novel features are being introduced into this show, which is being conducted jointly by the Fruitgrowers' Cool Stores' Association of Victoria and the Royal Horticultural Society.

It is hoped the effort will result not only in a financial success, but that there will be largely increased consumption of fruit as a result of this worthy enterprise.

The floral section is being well catered for by the Royal Horticultural Society, when Chrysanthemums will predominate. The Secretary of the Royal Horticultural Society is Mr. R. V. Mattingley, 8 Emily-street, Brighton, and the Secretary of the Fruit Section, Mr. R. E. Boardman, Box 1944, G.P.O., Melbourne.

Editorial
Chats

INTER-IMPERIAL TRADE.

Mr. Stanley Baldwin's Important Proposals.

GREAT INTEREST was created throughout the Australian fruit industry by the announcement by Mr. Stanley Baldwin, leader of the British Conservative Party, in favor of the creation of a British Empire Economic Unit.

Mr. Baldwin's proposals were subsequently endorsed by Lord Beaverbrook, who had been urging Imperial free trade.

While Empire free trade does not seem to be immediately possible, yet the proposals for British preferences for Empire products in return for Australian preferences in favor of British manufacturers and machinery is well within the bounds of practical politics.

The principal exports from Australia are primary products. Broadly speaking, the exportable surplus is 80 per cent. Our principal market is that of the Old Country. Committees of capable citizens are being formed to foster inter-Imperial trade. The fruit industry, amongst other primary industries, is keenly interested in these far-seeing proposals which are now taking shape.

ONE OF THE MOST MOMENTOUS proposals affecting the welfare of Australia, is now being considered by the Federal and State Governments. That is the construction of a uniform railway gauge. The cost would be about £25,000,000, of which the Commonwealth would bear one-fifth. The work would take several years to complete. The break of gauge has adversely affected all primary producers, and in particular, the fruitgrowers. It is to be hoped that our farseeing statesmen will agree to this necessary work being put in hand at the earliest moment. This enterprise would probably lead to the better co-ordination of transport services throughout Australia.

If Adam had a motto it would be: "Eat Less Fruit."

CANADA'S INCREASING TRADE WITH CHINA.

According to a report published in the "Canadian Review" "Agricultural and Industrial Progress in Canada," expansion of business with China has been one of the outstanding features of Canadian trade development in the post-war period, which has in every phase been arresting. The value of Canádian shipments to that country have gone up by leaps and bounds and, despite the internal troubles which split China, were maintained at a gratifying high level. With an increasing tendency towards stabilisation prospects are to-day more promising than ever.

Before the war Canadian trade with China was of insignificant volume, virtually balanced, and no very great expansion was in general anticipated. In 1913 Canada's imports from China had a value of 752,768 dollars, and her exports to that country stood at 740,690 dollars. In the last fiscal year imports from China had reached 3,095,296 dollars, and exports had reached the amazing total of 23,687,053 dollars, this latter figure being an increase of no less than 10,000,000 dollars as compared with the previous year. The increment is apparently largely accounted for by increased shipments of wheat and flour since the beginning of the year 1929, which are still large, and promise to continue so.

AUSTRALIAN APPLES FOR CANADA?

Trade Possible if Australia Will Lift Embargo Against Canadian Apples.

THE CANADIAN TRADE DELEGATION suggests that Australia should ship some of her surplus Apples to Canada during the flush of the export season. There would be then no necessity to cool store so much.

Australian Apples would be welcome in Canada if Australia would life the embargo on Canadian Apples. There was no danger of fire blight, and the Canadian Apples would come here during the "off" period in Australia.

CANADA APPOINTS MORE TRADE COMMISSIONERS.

In view of Canada's increasing overseas trade, it has been found necessary to appoint eight additional Assistant Trade Commissioners for service in Batavia, Shanghai, Auckland, N.Z., Glasgow, Liverpool, Paris, New York, and Rio de Janiero. These appointments will swell the staff of Canada's corps of Trade Commissioners to 31 Senior and 18 Assistant Trade Commissioners.

TEN HEALTH RULES.

Ten commandments of health suggested by Miss Marie Leonard, dean of women at the University of Illinois, are:—

Eat less; chew more.
Ride less; walk more.
Clothe less; bathe more.
Worry less; work more.
Idle less; play more.
Talk less; think more.
Go less; sleep more.
Waste less; give more.
Scold less; laugh more.
Preach less; practice more.

Answer to Correspondents.

Armillaria.—"W.P.C.," Somerville, asks: "Would you kindly let me know if sulphate of iron is a good remedy for Armillaria (fungus on roots). Has anybody had any good results from it, and, if so, how can it be applied, and how much to use per tree?"

Answer (by S. Fish, Department of Agriculture).—"Many people claim that sulphate of iron has given a measure of control against Armillaria root fungus, but one cannot point to any exact experiments on this matter. The way it is generally applied is to remove earth around the tree to the depth of about 4 inches and with a radius of one yard, about 1 lb. to 2 lb. of iron sulphate may be given to an old tree and less to younger trees. If possible, this should be watered in or applied during a rainy season, so that it will be washed down. If this does not occur, the chemical seems to set into a hard cake, and as a consequence very little of it would reach the roots. The effect of this is more a question of tree stimulation and not so much a question of its effect on the fungus, although it is just possible that the extra vigor gained by the tree is sufficient to offer a certain amount of resistance to the infection and future development of the fungus in the roots of the tree."

48 CASES TO THE TON.

South Australian Experience.

(To the Editor, "Fruit World.")

Dear Sir,—

In your last issue, in the monthly report of the Victorian Fruit Marketing Association, I noticed that Mr. Carne called attention to the number of cases allowed by the Railways to the ton. In South Australia, according to regulations, 42 cases are charged as a ton; last month, with another grower, we shipped at Blackwood, over 600 cases in one truck. I called attention of the S.M. to the fact that 42 cases per ton was based on hardwood cases, and suggested that this particular truck be put over the weighbridge, next time I went into the station he informed me that he has passed a credit for 13 cwt. to me, my portion of the truck being 270 cases, he also informed me that it weighed out at 48 cases to the ton. I thought perhaps this information might be useful.

Could you get me any information as to the results of the control of codlin moth this season with oil. I carried out the formula as given in your paper of the experiments carried by Mr. Ward, viz., calyx spray and cover spray of lead, and two sprays of oil. I regret to say that it was a failure, as I have a very bad infestation of moth, probably due to the very long hot dry spell. I should appreciate any information on this subject.

We are having great difficulty in filling our commitments for Apple export, while we have plenty of Apples they have not developed.—Yours faithfully,

GEO. W. SUMMERS.

Coromandel Valley, S. Australia,
18/3/30.

(Readers are invited to state their experiences with codlin moth control to assist our South Australian friends.—Ed F.W.)

QUARANTINE VIGILANCE.

Chinese Oranges with Citrus Canker Prevented from Entering Sydney.

THE NEED for unfailing vigilance in plant quarantine was demonstrated at Sydney early in February, when the authorities discovered that some Oranges which were being brought ashore by a Chinese, were badly affected with citrus canker—a dreaded scourge from which Australia is free.

The fruit, also the container, were destroyed.

REWORKING FRUIT TREES.

Preventing Polystictus Fungus.

Advice from England.

(The Editor, "Fruit World.")

Sir,—Re your article in the January number, on page 22, entitled "Reworking Fruit Trees," your readers may like to know that polystictus and any other fungus disease attacking limbs and grafts of reworked Apple trees may be entirely prevented by the simple expedient of leaving one or two branches of the original tree intact, and either grafting these branches in two or three years time when the new head on the other cut back branches becomes developed, or merely cutting them off if not needed.

This "piece-meal" way of re-heading," as we call it, does not give the tree such a shock as doing it all at once, the physiological condition of the tree is kept in a more normal condition, and, moreover, the branches left on a little longer give some fruit while the new young head is forming.

We are sending you under separate cover a copy of the third edition of "Modern Fruitgrowing," which may interest you, although much of the matter contained therein is suitable only to English conditions.—Yours, etc., W. Seabrook & Sons Ltd., The Nurseries, Chelmsford, England.

(Book received. Many thanks for same, also for the foregoing hints.—Ed. F.W.)

RE-WORKED APPLE TREES.

Die Back.

Mr. P. H. Thomas, Chief Horticulturist, Tasmania, writes as follows:—

Reading the December and January issues of the "Fruit World," I note that a number of fruitgrowers are drawing attention to the prevalence of the die-back (Polystictus versicolor) amongst re-worked Apple trees.

This disease has been experienced in Tasmania for some considerable time, and owing to the losses and injury experienced has been responsible for an almost complete change in the methods of "re-working."

After a number of years of observation and experiment, no satisfactory means of cure has been evolved in dealing with infected trees, and treatment generally resolves into adopting preventive measures when "re-working."

I am forwarding you a copy of a bulletin which illustrates the methods recommended, viz.: (a) High-grafting into the younger wood, or: (b) Re-furnishing by the grafting or budding process, plates 11, 12 and 19.

The latter method is becoming popular amongst growers, and although it involves a certain amount of time and trouble, the results in the earlier cropping and immunity from the disease more than compensate for this extra work.

PERSONAL.

Mr. **E. E. Meeking**, Senior Fruit Inspector, Victoria, accompanied by his wife, sailed for England on March 25, on the s.s. "Ballarat," on private business. He was granted leave of absence from the Agricultural Department.

The Fruit Exporters' Handling Committee, gave Mr. Meeking a complimentary dinner, and presented him with a heavy wallet in recognition of his valued services to the fruit industry.

* * *

Mr. **J. P. Piggott, M.H.A.**, manager of the Port Huon Fruitgrowers' Co-operative Association, has sailed for England, and will observe the fruit cargoes arriving at U.K. ports.

* * * * *

Mr. **Thornell**, orchard supervisor in the Young district of N.S.W., is thanked in the annual report of the Bribbaree Agricultural Bureau for valued services at the pruning demonstration last July in Mr. Peel's orchard.

* * *

Mr. William Lane, orchardist, of Quantong, was bitten on the arm by a snake whilst feeding his horses prior to journeying to Horsham with a load of fruit. First aid was promptly given, and after medical treatment he was soon out of danger.

* * *

Pomonal.—Messrs. Toutcher and Everard, Ms.L.A., together with the Superintendent of Horticulture, Mr. J. M. Ward, visited Pomonal early in March, and were impressed with the quality of the fruit and the methods of grading and packing.

* * *

Mr. H. E. Napier, general manager of the New Zealand Fruitgrowers' Federation, is leaving on a visit to England at the end of April to develop the Federations' trading business and observe marketing conditions. Mr. Napier will return via Canada and the United States.

South Australia.

EXPORT FROM SOUTH AUSTRALIA.

Total about 603,000 cases. Fruit of Good Quality.

Canadian Standard Case Adopted.

SOUTH AUSTRALIA'S EXPORT of Apples and Pears is expected to be about 603,000 cases during the 1930 shipping season.

In the course of an interesting letter on this subject, the general manager of the South Australian Government Produce Export Department (Mr. G. A. W. Pope), writes as follows under date March 21:—

The season, so late as the middle of February, promised so well that we expected to have a record export of 700,000 cases.

The first serious trouble was a terrific wind-storm in February, which swept through gardens on exposed hilly country, and blew off a large number of Apples.

In late February and early March, we had a nine-days heat wave which was a record for this time of the year, and consequently a large number of Apples were sunburned, and there was every appearance that instead of the fruit receiving sap from the trees, the trees were taking the sap from the Apples.

The failure of a following good rain left the Apples at a standstill, and consequently the trees are still loaded with an abundance of Apples under 2¼ in. size. A good rain immediately will still provide the State with a large crop of Romes and other late varieties.

The quality of the Cleopatras already shipped is so good that the South Australian reputation will be enhanced, especially as the universal use of the standard Canadian case materially adds to the attractiveness of the pack.

The South Australian Fruit Marketing Association made special and strenuous efforts, not only in introducing the package, but in seeing that all growers and packers were thoroughly educated. The Association induced the Minister of Agriculture (Hon. J. Cowan), to obtain the services of Mr. Basil Krone (the Victorian Expert), to give a week of demonstrations.

The Gerrard Wire Tying Machines Co. Pty. Ltd., made available the services of their expert, Mr. W. L. Gregory, who has spent some weeks amongst the growers, and several of the largest export firms have allowed growers to come to their sheds for education purposes. The President of the Association, Mr. H. J. Bishop, has been very active in this matter, and he is deserving of public acclamation.

The result of all the propaganda work is that for a first season, our growers are to be congratulated on the improvement made.

J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
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Branches { Western Market
Victoria Markets
MELBOURNE
Reference—Satisfied Growers in all States

RIDLEY & HOULDING
Covent Garden Market
LONDON
Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.
Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia.
Murdoch Bros., and A. J. Walshe & Co., Hobart, Tasmania.

Difficulty is being experienced with Jonathans, as the larger Apples have dropped badly, and the remainder lack color and size. Growers are leaving them on the trees as long as possible to overcome these troubles.

The Dunns are coming forward in splendid condition, and already a few Stones have been received. It is yet too early to say very much re the other varieties.

SHIPPING PROGRAMME FROM SOUTH AUSTRALIA.

The first ship of the season was the "Comorin," which sailed on February 27, with 4,000, for London.

During March South Australian fruit was lifted as follows:—March 1, "Moreton Bay," with 5,000 cases for Hull and 8,000 cases for London; 6th, "Otranto," 4,000 cases for London; 8th, "Nestor," 13,475 for U.K. ports; 10th, "Port Gisborne," 46,000 for Hamburg; 13th, "Naldera," 6,000 for London; 15th, "Runic," 8,000 for London and Liverpool; 15th, "Barrabool," 12,012 cases for U.K. ports; 20th, "Orford," 4,000 for London; 22nd, Telamon, 16,075 cases for U.K. ports; 22nd, "Hurunui," 78,000 for Hamburg; 22nd, Port Melbourne," 47,500 cases for Hamburg, 13,000 for Hull; 27th, "Mongolia," 8,000 for London; 29th, "Hobson's Bay," 10,000 for Hull, 3,000 for London.

APRIL SHIPMENTS.

April fruit shipments were as follows:—April 3, "Oronsay," 4,000 (London); "Natia," 80,000 (Hamburg); 5th, "Ceramic," 18,000 (London, Liverpool); 10th, "Narkunda," 8,000 (London); 12th, "Balranald," 19,600 (U.K. ports); 17th, "Orontes," 4,000 (London); 23rd, "Ballarat," 19,500 (U.K.); 24th, "Asphalion," 14,050 (U.K.); 24th, "Cathay," 8,000 (London); 26th, "Port Hobart," 27,500 (Hamburg), 12,500 (Hull); 26th, "Lenna," 42,600 (Hamburg); 26th, "Esperance Bay," 10,000 (Hull), 3,000 (London).

Programme for May.

The programme for May is as follows:—

May 1, "Orama," 4,000 (London); 3rd, "Ulysses," 10,275 (U.K.); 8th "Mooltan," 5,000 (London); 10th, "Jervis Bay," 8,000 (Hull), 2,000 (London); 17th, "Anchises," 5,875 (U.K.); 21st. "Bendigo," 11,000 (U.K.). Total, 602,962 cases.

THE SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Committee of the South Australian Fruit Marketing Association was held on Monday, March 4, when the Chairman and members of the Committee of the Overseas Shipping Representatives' Association, attended at the commencement of the meeting, to submit particulars of a proposed charter of a steamer for May loading, which it was considered would finalise the freight position for the season. The suggested arrangements were approved, subject to confirmation of bookings.

A sub-committee was appointed to interview the Collector of Customs in reference to the time of opening and closing of sheds at Port Adelaide and Outer Harbor.

It was resolved to wait on Mr. G. Quinn, Chief Horticultural Instructor, to discuss the hours of duty of fruit inspectors at Port Adelaide and Outer Harbor. It was considered essential that the inspectors should be available from 8 a.m. to 5 p.m. daily.

It was also decided to ask that Government certificates be made available to shippers at the time of inspection, as there had been some delay in the past before certificates were ready.

A letter was received from Secretary, S.A. Fruitgrowers' and Market Gardeners' Association, asking this Association to co-operate with them in regard to representation at the Hobart conference of fruitgrowers in May next.

It was resolved to endeavor to arrange for one or more representatives from this Association.

It was decided to have the Association incorporated, and the Secretary was instructed to see the Association solicitors, and ascertain what steps had to be taken, and what the cost would be.

The total levy for the present season was fixed at one farthing per case.

Anybody Believe This?

"Are you still taking a cold bath every morning?"

"No. I stopped doing that to save time."

"Why, a cold shower doesn't take more than a minute or two."

"I know; but I used to spend three-quarters of an hour curled up in bed thinking about it."

MURRAY CITRUS GROWERS' CO-OP. ASSOCIATION LTD.

MUCH USEFUL WORK has been accomplished by the Murray Citrus Growers' Co-operative Association (Aust. Ltd.). For several years this Association has been most efficiently served by Mr. J. A. Parkes, as Secretary.

Since Mr. Parkes' transfer to Melbourne as general manager of the Victorian Central Citrus Association, Mr. N. H. Underwood has become Secretary of the Murray Citrus Growers' Association.

In the course of an interesting letter describing the activities of this Association, Mr. Underwood writes:—

The operations of the Murray Citrus Growers' Co-op. Association cover the citrus production in the River Murray districts of Mypolonga, Renmark, Waikerie, Berri, Kingston, Moorook, Cadell, Barmera, Ramco, Murray View, which include the whole of the river production, of which the Association controls between 80 per cent. and 90 per cent.

Other citrus-growing districts in this State are Salisbury, Torrens Valley, and the Inman and Hindmarsh Valley area, near Victor Harbor. These three districts have each their own Association, and we are seeking closer co-operation with these bodies, and are hopeful that the coming season will see an improvement in this respect.

Fruit handled by this Association last season amounted to approximately 170,000 cases sent to the Melbourne market, and 60,000 to the Adelaide market. Both these figures constitute a record, and are evidence of the steady growth made by this Association.

The Association was started in 1921, and now comprises a membership of 361 growers, and taking our members as a whole, I can safely say that they are the most progressive amongst the fresh-fruit producers in this State.

Considerable advances have been made in the past years so far as packing and grading are concerned, and there is a growing tendency to put the fruit through a central packing house, such establishments being in existence at Mypolonga, Berri, Waikerie and Renmark, with a new shed to be established this season at Moorook.

So far we have not succeeded in getting all our growers to utilise the central packing houses, but this, I think, will be merely a matter of time.

T. STOTT & SONS
Fruit Merchants
Established 1882

A Trial Consignment solicited from Growers in all States.

Prompt Settlement.

11 WESTERN MARKET,
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Cooksley & Co.
(W. P. COOKSLEY)
Reliable Fruit Agents
Over 30 Years Experience
TRY THEM !
Telegraphic Address:
"COOKSLEYS," BRISBANE
Fruit Exchange, Brisbane
QUEENSLAND
Shipping No. 29
Reference: Commercial Banking Co. of Sydney Ltd.

Do not run any Financial Risk with your Fruit but Consign it to

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FRUIT EXCHANGE——BRISBANE

SELECTED AGENTS FOR:
Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.
Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

We market our fruit on consignment through six agents in Melbourne, and nine in Adelaide, and in common with the Victorian Central Citrus Association we make use of the Melbourne market representative and contribute a considerable sum annually towards the Melbourne marketing expenses.

Each of our districts has a local executive which elects delegates to our Central Executive, which forms the controlling body of the Association. From our Central Executive we send two members to the Federal Citrus Council and work very closely with affiliated Associations in other States, thereby keeping right up to date on export matters and any other subject, such as maturity standards, and pure food regulations, which affect the whole of the industry.

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
MELBOURNE, VIC.
Highest Market Rates Assured
Prompt Settlements

One of the most important subjects with which we are dealing at the present time is that of the establishment in South Australia of a Fruit Board Act on somewhat similar lines to the Queensland Committee of Direction.

Fighting Insect Pests in the Orchard.

Codlin Moth.

EXAMINE hessian bandages, crevices and bark of Apple, Pear and other fruit trees for the larva and chrysalids of codlin moth. Dip bandages in boiling water and replace on trees. Remove all loose bark as the insects hide underneath it and pupate. Gather up and burn all fallen fruit.

Looper Caterpillars.

Looper caterpillars are very plentiful in quite a number of orchards this season. They are exceedingly destructive to the fruit spurs of Apple and other trees. Fortunately they are easily destroyed with arsenate of lead sprays.

Red Spider and Bryobia Mite.

These mites are doing quite a lot of damage to Apple and other leaves of fruit trees at the present time. When attacked by these mites the leaves become a sickly yellow color and die. The mites are found on the underside of the leaves. Spray with "Volck" oil, 1 in 40. It is necessary to thoroughly spray the underside of the leaves. Nicotine sulphate or black-leaf 40 is also recommended. In winter use lime sulphur or oil sprays to destroy eggs.

Light-brown Apple Moth.

The small, active, green caterpillars of this moth are more plentiful than usual this season, and are attacking quite a number of varieties of Apples, Pears, etc. Spray with arsenate of lead.

Woolly Aphis Parasite (Aphelinus).

Owing to the favorable weather recently, woolly aphis has spread in a number of orchards. It is advisable to obtain a supply of the parasites from any of the Orchard Supervisors of the Department of Agriculture, Melbourne.

Rutherglen Bug.

These troublesome little plant bugs have not been so numerous as usual this year. When noticed, spray with phenyle spray, 1 quart phenyle, 1 bar hard soap, 3 lbs. washing soda, 40 gallons water. Dissolve in 4 gallons boiling water; reduce to 40 gallons, and add phenyle.

Orange Butterfly.

Pinara or Snout Moth of Apple.

See "The Fruit World," March 1, 1930, p. 96.

Painted Apple Moth.

The tufted caterpillars of this moth are still to be found in fair numbers in many orchards in this State. They are particularly destructive to the fruit spurs of Apple and other fruit trees. Spray with arsenate of lead.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of
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Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

Scale Insects on Fruit Trees.

San Jose, Red, Apple Mussel and other scales are now moving. Spray at once with any of the white oils, 1 in 40.

Pear Root Aphis.

See "The Fruit World," March 1, 1930, p. 96.

Victorian News.

Fruit Shows.

SOMERVILLE.

THERE was an excellent display of fruit at the annual show of the Somerville Horticultural Society on March 12. Owing to the late season the Jonathans were not as much in evidence as usual. The tray and packed fruit sections were outstanding features. There was a particularly pleasing display of Apples, wrapped and packed in bushel cases by pupils attending the fruit packing classes of the Department of Agriculture. Pakenham Upper, with 95 points out of a possible 100, won the competition, thus holding the handsome shield presented by the Gerrard Wire Tying Co., Tyabb W. came second with 94 points, and Tyabb, with 92 points was third.

The packing was in every way excellent, the Apples all being wrapped in printed paper. Excellent packing was also displayed in the exhibits from Somerville, Red Hill, and Hastings. The effect of these classes and competitions has been to improve the packing of fruit generally. The trophy for the individual packing competition was won by Miss Eileen Dennet.

Mr. J. D. Grant, the veteran exhibitor, again won many prizes in the Apple section; he won the prize for the best nine varieties suitable for export,, the varieties including Jonathan, Tasma, Delicious, Cleopatra, London Pippin, Stone Pippin, Stewarts, Alfriston and Dunns. Mr. R. J. Thornell was second, his varieties being Granny Smith, Delicious, Cleo., Londons, Romes, Dunns, Duke of Clarence, Reinnette.

The champion tray was that of Mr. J. D. Grant, the variety being Reinnette de Canada; the fruit was of high quality, firm, bright, true to type, and free from blemish.

In the Pear section, Mr. W. Boe won many prizes with choice fruit. In the export class the varieties included Glou Morceau, Winter Cole, Packhams, Winter Nelis, Josephine and B. Bosc.

The flower and vegetable section attracted many entries, the exhibits being of high quality. There were also prizes for cookery, Apple pies, cakes, jams, bottled fruits, etc.

The poultry and dog sections were well contested, and the ring events were appreciated.

There were also exhibits of machinery, etc. The Harvey grader has points of value, including a short rubber channel through which the fruit, in passing, is momentarily checked and revolved on its edge before passing along the belt to find its correct bin. The Ronaldson Tippett spray pump was displayed, also the "New Record" circular saw bench and tree clearing machinery.

The President of the Society, Mr. W. Brunning, presided at the show function. The show was officially opened by Hon. W. Slater, M.L.A., Minister for Agriculture, who said all parties were in favor of a Marketing Act for primary producers. Success had followed the introduction of similar Acts in N.S.W. and Queensland. Short addresses were also given by Hon. A. E. Chandler, M.L.C., Hon. W. Tyner, M.L.C., and Downward, M.L.A.

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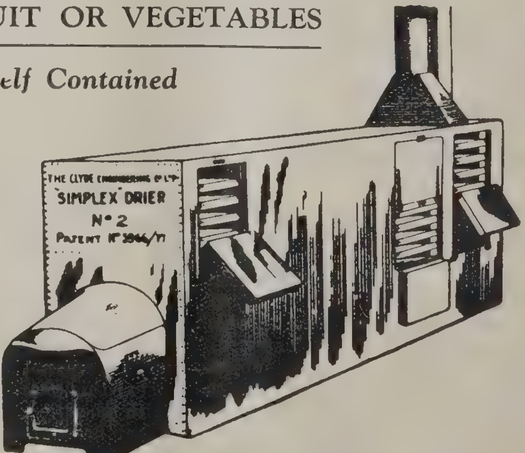
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DIAMOND CREEK.

VERY choice fruit was seen at the annual show of the Diamond Creek Horticultural Society. The show was officially opened by Mr. W. H. Everard, M.L.A. The quality of the fruit was higher than at many previous shows. The grand championship class for six varieties of Apples and three of Pears, was won by Mr. J. Cowin, the second prize going to Messrs. L. and R. Wadeson. For six varieties of Pears, Mr. J. Pill won first prize, with Mr. W. G. Whicker a very close second; three varieties culinary Pears, Mr. P. L. Lawrey, first, with Mr. W. J. Miller a good second; three varieties dessert pears, first, W. J. Whicker; second, Wadeson Bros.

In the vegetable section the entries were not so numerous as usual. Flowers, however, were well represented, Mr. G. W. Burns (Ringwood) being particularly successful with Dahlias, and R. Brown (Diamond Creek) with Gladioli.

WANDIN.

THE autumn show of the Wandin Horticultural Society, opened by Mr. Knox, M.L.A., on March 8, was very successful. The fruit, fresh and preserved, was of high quality. In the flower section some delightful blooms were staged. The champion prize for 12 varieties of fruit was won by Mr. W. J. Sebire. Other successful exhibitors in the fruit section were Messrs. B. Burgi, F. and A. Henderson, Jas. Howell, Jnr., A. McCully, Burgi Bros., E. H. Wallace, E. W. Wallace, E. Johnston, Gaudion Bros., W. Dighton.

RED HILL SHOW.

There was a large attendance at the ninth annual show of the Red Hill and District Agricultural and Horticultural Association on March 18.

Fruit, vegetables, flowers, and farm produce of choice qualities were displayed, and there were many interesting ring events. Messrs. Edwards Bros. won the principal prizes for Apples packed for export. The prize of the champion tray dessert Apples was won by K. Kleine.

Other prize winners for such varieties as Rokewoods, Reinette, Jonathans, Stone Pippin, Yates, etc., were: W. Roberts, J. Roberts, N. Prosser, F. Nash, G. Laurissen, Sheehan Bros., J. Womack, C. Harrison.

In the Pear section prizes were won by N. Prosser and W. J. Holmes.

A producers' market has been opened at Frankston, and growers on the Mornington Peninsula have found it of value in the disposal of fruit.

Red Cliffs.—Up to March 12, over 1,000 tons of Currants and Sultanas had been received at Red Cliffs packing sheds. The quality is very good. Consignments of Currants have been despatched for Commonwealth sales, also for English and Scottish ports.

Myers Emporium, Melbourne, used 50 tons of Apples in their cafetaria last season.

Lancaster.—The Apricot and Pear crops were very heavy, the quality of the fruit being excellent. There is much activity in handling the canning Peaches.

Mt. Dandenong.—The Blackberry pest is spreading rapidly. This problem should be tackled by the authorities without delay.

INTERSTATE FRUIT TRADE.

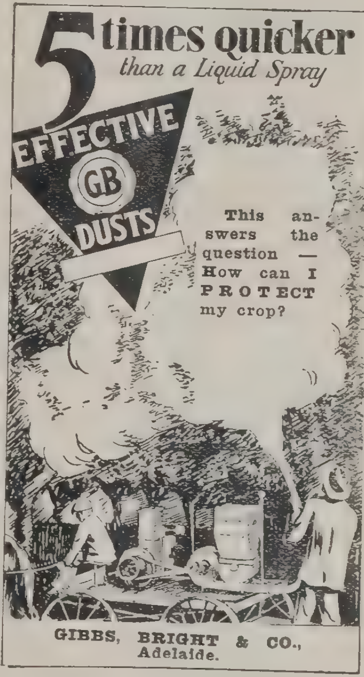
Fast Goods Train for Fruits from Victoria to Sydney and Brisbane.

THE Victorian Fruit Marketing Association is in receipt of a letter from the Railways Commissioners, giving information regarding a new and exceptionally fast goods train service for the transport of fruit to Sydney and Brisbane.

Under ordinary circumstances, fruit forwarded from Victorian stations in time to connect with the Saturday goods train from Melbourne to Albury arrives at the N.S.W. border station on Monday morning, but arrangements with the N.S.W. Railway Department, involving the running of a special train to Sydney, now permit of the placing of the fruit at Albury on Sunday morning. The connecting special then lands the consignments in Sydney for Monday's delivery and in Brisbane for Wednesday's delivery.

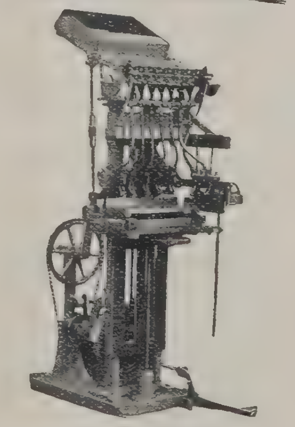
The operation of this faster service is contingent upon a total quantity of 75 tons of fresh fruit being available, as that tonnage is necessary to warrant the running of a special train from Albury to Sydney. To connect with the Saturday train at Melbourne, Harcourt and Mornington Peninsula, growers should despatch their fruits on Friday, while Goulburn Valley growers should time their consignments to connect at Mangalore, with the fast train to Albury.

DUSTING



GIBBS, BRIGHT & CO.,
Adelaide.

BOX MAKING
MILLERS' BRITISH-MADE
NAILING MACHINES.



SOLE AGENTS,
GIBBS, BRIGHT & Co.
27 Grenfell Street, ADELAIDE

If soft fruit growers concentrate on the despatch of interstate consignments by this improved Saturday service, they will be securing more expeditious delivery than on week days, besides helping to maintain the service for the benefit of fruitgrowers generally.

YARRA GLEN SHOW.

THE 30th Annual Show of the Yarra Glen A. & H. Society, was held on March 19. Mr. W. H. Everard, M.L.A., opened the Show in the presence of a large gathering.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Asscciated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St., London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA

Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

The fruit shown was of high quality, the principal prizes being won by Mr. A. R. Hubbard in the Apple and Pear section.

Other prize winners include: J. Smedley, J. Till, H. G. Phillepe, J. W. Lawrey, A. Cooper, S. B. Mowle, J. Rentour, S. Lawrey.

There were excellent specimens of Apples, including Jonathans, Rome Beauty, Reinnette, Granny Smith, London Pippin, Rhymer, Delicious, etc. Pears included: Kieffer, B. Bosc, Josephine, Packham.

Other sections of the Show included vegetables, flowers, cattle, sheep, poultry, preserves and jams, school work, cooking, etc.

The President, Mr. Thos. Irvine, the Secretary, Mr. E. A. Cary, and the Committee are to be congratulated on the success of the Show.

VICTORIAN FRUIT MARKETING ASSOCIATION.

A MEETING of the Standing Committee of the Victorian Fruit Marketing Association was held at the C.T.A. on March 11.

There were present: Messrs. Lawford and Webb (growers), J. B. Mills, Parnham, Mellor, Barker and Cave (shippers), and Boardman (Secretary). Mr. Mills was elected Chairman.

Louvre Trucks.—Reply received from Railway Department in answer to our letter, requesting any specific instance of uneven floors in trucks to be reported when noted.

Consignments from Warragul.—Correspondence was read from Mr. C. P. Nobelius, suggesting that fruit for export from Warragul be sent to one consignee to save freight and to secure loading on a more convenient train. The Secretary advised having consulted the Railway Department, who were willing for the loading on the desired train, the matter of sending to one consignee being a local matter to be arranged among the growers themselves.

In the discussion it was pointed out that certain difficulties existed regarding the information on the waybill, and the claim for shortages should same arise. It did not seem immediately possible to send fruit for export to one consignee at ship's side. The Secretary's action in writing to Mr. Nobelius in these terms was endorsed.

Softwood Shooks.—Secretary reported correspondence with C. H. Tutton & Co., and with Minister for Customs requesting that softwood shooks for Apple boxes be permitted entry under item 404, 10 per cent. ad valorem (refundable duty) as had been arranged with dried fruit boxes. The Minister replied stating this matter was receiving his attention. Decided on the motion of Messrs. Webb and Barker, to write again urging the Minister to accede to our request.

Mr. E. E. Meeking.—The Secretary reported that at the request of members of the Executive he had written to the Minister for Agriculture, appreciating Mr. Meeking's good services to the fruit industry for over 20 years, and, in view of Mr. Meeking's early visit abroad, requesting the Minister to provide facilities for that officer to report on phases of the fruit industry while in England.

The Minister's reply was read, stating that Mr. Meeking was going abroad at his own expense, and the Department would facilitate any enquiries he might make.

MARGETSON
& CO. LTD.

Fruit Importers &
Salesmen

30 James St. and James
St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London, W.C.

Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand.
London, W.C.

Shipping Nos.
431 and 432

Appreciative references were made by several members regarding Mr. Meekings' capable services. The Chairman reported that the Fruit Exporters' Handling Committee was providing practical recognition of Mr. Meeking's services.

Pre-cooling.—Mr. C. J. Parnham wrote, stating it was not possible to arrange the comparative tests this season of pre-cooled and non pre-cooled fruit.

The Chairman stated that the experiment would be conducted in the next export season, if at all possible. Arrangements would be put in hand about November or December of this year, to secure the necessary chambers.

NEW WHOLESALE FRUIT MARKET FOR VICTORIA.

Tenders were called on March 15 for the erection of the new Melbourne wholesale fruit market, on the Old Cemetery site, Queen Victoria Market. Tenders were invited for two sections, and same closed on March 27.

CHOICE VALENCIA ORANGES.

Mr. C. H. Leeder, of Merbein, has a Wonderful Strain of this Variety.

At the recent Australian Citrus Growers' Convention, at Mildura, Mr. C. H. Leeder, of Merbein, very kindly sent along a case of Valencia Oranges, which the delegates greatly enjoyed.

The fruit was firm, well-colored, and of a delicious flavor; it was freshly picked as the fruit hangs on the tree right into February.

Buds from these splendid trees are being supplied for propagating purposes.

It is by observing such excellent strains of varieties as on Mr. Leeder's property, and propagating from the buds, that the Australian Citrus industry will be uplifted.

SPRAYING FOR PEST CONTROL.

Handbook on "The Treatment of Orchard Pests and Diseases," Obtainable from Neptune Oil Co

Spraying is such an important part of the fruitgrowers' duties that all light on this subject is welcome. For Neptune sprays users are appreciative, and the Neptune Oil Co. has now prepared a valuable handbook on "The Treatment of Orchard Pests and Diseases." Great care has been taken in the preparation of this handbook, and copies are available on early application to the Neptune Oil Co., River-street, Richmond, Melbourne.

The firm also has a service department, and will answer any questions by growers relative to spraying.

Value Received!

"When I got married I asked the parson how much for the ceremony, and he said: 'Just what you think it's worth,' so I gave him a shilling. He had a good look at my wife and gave me tenpence change!"

What Trees Shall We Plant in 1930?

Some Helpful Suggestions.

NORMAL ORCHARD DEVELOPMENT ON good land intelligently made as to the suitability of the varieties planted, has always proved a good investment, and will invariably survive on a paying basis any normal period of depression.

So writes Mr. Geo. W. Peart, proprietor C. J. Goodman's Nurseries, Bairnsdale, Vic.

Continuing, Mr. Peart states:—

In planting an orchard, avoid the novelties and plant only the proven kinds. The money in fruit growing has rarely, if ever, been made from novelties.

"YARRA"
QUICK BREAKING
White Oil Emulsion
Easy to mix, Effective in result, Economical in quantity.
USE NOW
ON CITRUS TREES.
PARSONS & JAQUES
Manufacturing Chemists,
6 Patterson St., 155 Yarra St., Abbotsford, Vic.
Tasmanian Agents—
N. L. HOPKINS, HOBART.

Nuts.—With present tariff protection, all varieties of Nuts—Almonds and Walnuts included—can be safely planted in quantities. Australia imports thousands of bags yearly of Almonds, Walnuts, etc. This should not be, and now, more than ever, is the time to plant Almonds and Walnuts on a commercial basis in good land and proven districts.

Apples.—There are many sections where Apples can be produced in quantity and of exceptional quality. In such areas Apple planting in the correct varieties looks an extremely good proposition. Plant now, and be ready for the not far distant day wnen Apple orchards will assuredly rank much higher in £ s d than at present.

Apricots.—For the time being, only the extremely early dessert varieties and standard canning sorts are reasonably safe. Tilton, Trevatt and Blenheim have come into greater favor than the Moorpark with canners. PLANT THEM!

Cherries.—This fruit is very partial indeed to localities. Given the right conditions in climate, soil and drainage, there is no other deciduous fruit with prospects to equal those of the Cherry.

Nectraines.—The Nectarine can be grown in any safe Apricot or Peach district. Dried, they are superior in flavor and quality to the dried Peach. For fresh consumption the demand is limited, and four varieties at most are plenty to make a good orchard succession.

Peaches, Dessert. — White-fleshed varieties having a good red skin keep the market to themselves, and intending planters need to carefully investigate their marketing conditions before making heavy dessert Peach plantings. It would seem preferable to try for the very early and very late markets — other things being equal.

Peaches, Clingstone.—For some time past plantings have been very limited. Many old orchards in original canning Peach areas are falling back in production, and a spurt in planting can reasonably be expected at any time. Instead of seven or eight kinds as in the past, planters will probably "dig in" on two or three at most.

Pears.—Export possibilities with this fruit are tremendous. Bartlett is our chief canning Pear—in fact, there is now no other seriously wanted. It cool stores for two to three months, therefore success as an export Pear in the near future should be certain. Bartlett, as well as other "already proved" export and cool store Pears, merit heavy plantings.

Plums.—With the exception of early dessert and the late dark varieties, planting should be conservative.

In Conclusion.—As a result of the troubles of the past few years, many growers have fallen down in their orchard practice. Furthermore, they are neglecting to replant the tree mortality that always takes place—**You cannot afford to let your orchard run down.** Therefore make your replacements and extend judiciously.

CHEERFULNESS.

If there's one virtue in the world that always helps, it's cheerfulness,

New Zealand.

NEW ZEALAND EXPORTS.

New Zealand is in the process of shipping 1,000,000 bushels of fruit to England and the Continent in the present season.

Shipping arrangements included boats as follows:—February 12, "Tainui," for London, 9,000 cases; February 26, "Rangitane," for Southampton, 23,000 cases; March 13, "Cumberland," for London, 25,000 cases; March 27, "Port Brisbane," for London or Southampton, 14,000 cases.

The heaviest period of shipment is from the middle of March to the middle of April.

Scott & Edwards

S. E. Scott, late Manager,
Fruit Dept., Denny's Lascelles
Ltd., Melbourne.

Shipments to United Kingdom
and the Continent.

**Personal Supervision of
Consignments.**

129 KING STREET
(opposite Wool Exchange).
MELBOURNE
Telephone: F 4970.

Fruitgrowers at Poverty Bay, N.Z., recently decided by ballot to pool their export fruit on the same lines as has been operating successfully at Auckland for the past few years.

AMERICAN RAISINS IN NEW ZEALAND AND CHINA.

For the first seven months of 1929, 3,471,041 lbs. of raisins were exported from U.S.A. to New Zealand, as compared with 2,726,737 lbs. for the same period last year.

Raisin exports from America to China for seven months ending July 31, 1929, amounted to 4,583,916 lbs., showing an increase of nearly 1,800,000 lbs. over the same period in 1928.

Latest Statistics.

Fireblight Under Control.

The total area under fruit in New Zealand for the season 1928-29 was 24,834 acres. In the North Island, 11,914 acres, and 12,920 acres in the South Island.

Fruit production for the last two statistical years has been as follows:—

	Fruit Produced. 1927-28. Bushels.	Fruit Produced. 1928-29. Bushels.
Apples	2,199,306	2,067,100
Pears	245,472	261,193
Peaches	124,929	144,229
Nectarines	18,207	18,948
Apricots	75,847	66,433
Plums	64,218	66,557
Cherries..	10,366	9,486
Oranges..	6,311	7,971
Lemons..	26,230	35,869
Quinces..	3,250	3,739
Walnuts..	1,000	569
Other fruits and nuts	472	131

The acreage of each kind of fruit for 1928-29 was:—Apples 10,666, Pears 994, Peaches 933, Nectarines 135, Apricots 517, Plums 424, Cherries 145, Oranges 7, Lemons 215, Quinces 21, Walnuts 23, other fruits and nuts 3. These figures for production and acreage of each kind are only approximate, as the acreage grown within boroughs is not collected.

The foregoing information was courteously supplied by Mr. J. A. Campbell, Director of the Horticulture Division, who concludes as follows:—

As regards

the fireblight situation,

I am pleased to say that in the leading orchard areas the disease is well under control and gives very little anxiety. The South Island orchards are still quite free from the trouble.

QUEENSLAND.

The Victoria Cross Manufacturing Co. Ltd., of Woolloongabba, South Brisbane, Queensland, are manufacturers of jams, jellies, preserves, etc. This company recently absorbed the Queensland Preserves Ltd., and the Queensland State Cannery. Their Victoria Cross brand of fruit preserves, etc., is favorably known.

Western Australia.

Fruit Shipments, 1930 Season.

FRUIT shipments from Western Australia during the 1930 season are expected to total 163,000 cases, being very much less than the quantity shipped the previous season.

Mr. Geo. W. Wickens, Superintendent of Horticulture, gives details of the shipping programme as follows:—

Continental, 1930.

March 10, "Port Gisborne" (Stockholm), 39,500; (Hamburg), 18,000; 18th, "Port Melbourne" (Hamburg), 31,000; April 3, "Port Bowen" (Hamburg), 26,200. Total, 114,700 cases.

Hay Stack Covers

for covering hay stacks, etc., onions, wheat, wool, lucerne, etc., also as a tarpaulin.

Price: 3-Star.

12 x 20	£2	3	0
12 x 24	2	13	6
12 x 30	3	8	6
18 x 20	3	8	6
18 x 24	4	2	6
18 x 27	4	12	6
18 x 30	5	2	0
21 x 30	5	17	6
21 x 33	6	7	0
22 x 24	5	7	0

Price: 4-Star.

12 x 20	£3	1	6
12 x 24	3	15	0
12 x 30	4	11	0
18 x 20	4	11	0
18 x 24	5	9	0
18 x 27	6	3	0
18 x 30	6	15	0
21 x 30	7	17	6
21 x 33	8	12	6
22 x 24	6	14	6

Size 22 x 24, waggon size only, includes ropes; other sizes, ropes 3/6 extra.

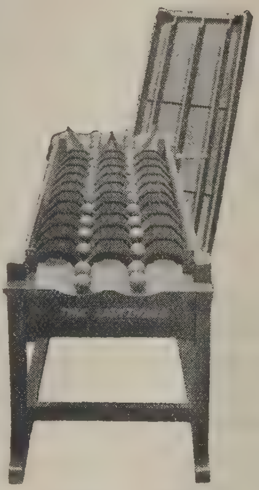
Special Sizes Made to Order.
Also duck tarpaulins, verandah blinds, car covers, window blinds and all canvas goods. Please write for full list.

The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine St., Geelong, Vic.
Secondhand Sacks For Sale.
Manufacturers of all Descriptions of Canvas Goods.

United Kingdom.

March 5, "Moreton Bay" (London), 10,000; 10th, "Otranto" (London), 3,500; 13th, "Nestor" (Liverpool), 1,800; 20th, "Barrabool" (London), 7,500; 24th, "Orford" (London), 3,500; 29th, "Telamon" (Liverpool), 1,000; 31st, "Mongolia" (London), 5,000; April 2, "Hobson's Bay" (London), 10,000; 7th, "Oronsay" (London), 3,500; 14th, "Narkunda" (London), 2,500. Total, 48,300 cases. Grand total, 163,000 cases.

Of the foregoing, four ships loaded 60,000 cases at Albany; the balance was loaded at Fremantle.



"To Choose the Best is Wisdom"

Complete Up-to-date Equipment
for
Citrus Packing Houses
and Individual Growers

Polisher Brusher.

includes:—

- Washers
- Driers
- Polishers
- Sorting Tables
- Sizers
- Gravity Conveyors
- Lidding Presses
- Packing Stools
- Paper Holders, Etc.
- Ethylene Gas.

We will be only too pleased to supply particulars of equipment and blue prints of layouts to suit various sizes of Packing Houses.

The
"Lightning" Fruit Grader Co.
5 Hoddle St., Collingwood, N.9., Melb., Vic.
Cable and Telegraphic Address:—"Lightning," Melbourne.

MANURING OF CITRUS FRUIT.

As CITRUS TREES are evergreen and more or less active right through the year, they should receive a dressing of manure twice a year, the first near the end of winter or early spring, and the second about Christmas time or a little later, states the N.S.W. Department of Agriculture. The applications will then be timed so that the plant-food will be available at the commencement of the two main growths in the trees.

The following mixture is recommended: Sulphate of ammonia, 6 cwt.; superphosphate, 3 cwt.; sulphate of potash, 1½ cwt.; mix all well together, and apply 1 lb. of the mixture per tree for each year of the tree's age.

The fertiliser should not be placed close to the butt of the tree, but spread out well beyond the outer fringe of the foliage. It should be worked in with the plough, cultivator, or forked hoe, and a small area only should be spread out at a time, so that it can be worked in before it is washed away with rain.

Where time will permit, one of the best ways of applying fertiliser is to spread it when ploughing along each furrow before the next furrow is turned on to it. Care must be taken to see that the fertiliser is not in lumps, but is evenly distributed.

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

WHITE OIL EMULSION.

Detailed particulars of "Yarra" white oil emulsion, manufactured by Messrs. Parsons & Jaques, of Abbotsford, Vic., are to hand.

The firm points out that their white oil emulsion is essentially a summer—or growing period—spray, for use at any time, particularly when insect pests, scale, etc., are on the move and are most vulnerable. For combining with arsenate of lead against codlin moth, satisfactory results are reported. "Yarra" white oil is prepared from purified paraffin oil, free from unsaturated hydrocarbons, acids and volatile compounds.

The cheerful person is the one who gets invited again, and cheerfulness is quite consistent with dignity. Make no mistake, the successful man can still smile. It's not at all undignified.

Groans and moans never glorified anything, but good cheer helps the world go round.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle Etc.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE," 499 LITTLE COLLINS ST.
MELBOURNE.

An Authoritative Opinion

GIVING evidence before the Tariff Board in its recent Fertiliser Enquiry, a South Australian witness (a practical orchardist and nurseryman, and a Member of the Advisory Council of Agriculture) said:

"Tests at the Experimental Orchard at Berri indicate that Sulphate of Ammonia is producing results in fruit production not obtainable with other manures tested under their experiments. Similar results apply to experiments carried out at the Government Experiment Orchard, at Blackwood, on apples and other fruits. It is not my intention to quote a multitude of figures in support of these claims, as I believe you to be fully aware that

SULPHATE of AMMONIA

will produce more fruit, and of a better quality, without going into the results of tests which have been carried out from time to time in various parts of the world, and which are no doubt familiar to you.

"As far as our own State (South Australia) is concerned, the results obtained at the two abovementioned experimental orchards are convincing enough to warrant little comment."

Order SULPHATE OF AMMONIA NOW, *either from your fertiliser agent or packing shed.*

Literature from
THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE
360 Collins Street, Melbourne.

Important International Horticultural Congress.

London, August 7 to 15, 1930.

Of Vital Interest to Australia and New Zealand.

A HIGHLY IMPORTANT International Horticultural Congress is to be held at London from August 7 to 15, under the auspices of the Royal Horticultural Society and the International Committee for Horticultural Congresses. Subjects include:—

"The Excitation of Dormant Buds under External Influence." (Dr. F. E. Denny, U.S.A.)

"Graft Hybrids." (John Innes Horticultural Institution, England.)

"Raising Root Stocks from Seed." (G. E. Yerkes, U.S.A.)

"Root Stocks from Seeds of known Parents." (Dr. Carl G. Dahl, Sweden.)

"Special Methods of Practical Utility in the Vegetative Propagation of Plants." (Dr. R. J. D. Graham, and Laurence B. Stewart, Scotland.)

"The Influence of the Nutrient Conditions of Seeds and Cuttings upon the Development of Roots." (Miss Mary E. Reid, U.S.A.)

"Factors influencing Root Growth of Cuttings." (Professor P. W. Zimmerman, U.S.A.)

"Varieties Grown on Own Roots." (Niels Esbjerg, Denmark.)

"The Wild Progenitors of Fruit Trees in Turkestan and in the Caucasus." (Professor N. I. Vavilov, Russia.)

"The Development of a Research Programme around the 'Build Up' of a Fruit Plant." (R. G. Hatton, M.A., England.)

"Vine Propagation." (Dr. H. Faes, Switzerland.)

"The Influence of American Stock on French Vines." (Louis Ravaz, France.)

"Propagation of Citrus Fruits in Japan." (Professors T. Tanaka and Y. Tanaka, Japan.)

"Studies on Rootstock Reactions in Citrus." (Professor H. J. Webber, California.)

"The Propagation of Citrus by Cuttings." (Dr. F. F. Halma, California.)

"The Ripening Process in Fruits, with special reference to the Fig and the Grapefruit." (Dr. H. P. Traub, U.S.A.)

"The Fruit Tree Complex in relation to Environment. Some Current Investigations at Long Ashton." (Professor B. T. P. Baker, M.A., England.)

"American Experiments in Propagating Deciduous Fruit Trees by Stem and Root Cuttings." (Professor E. C. Auchter, U.S.A.)

"National Tastes in Apples." (W. T. Macoun, Canada.)

"The Frost Injuries of Fruit Trees in Poland in 1928-29, with special reference to the Influence of the Stock and Scion upon the Resistance of the Apple Trees against the Frost." (Dr. L. Filewicz, Poland.)

The Congress subscription fee is £1; this should be sent to Col. F. R. Durham, Secretary, Royal Horticultural Society, Vincent Square, Westminster, London, S.W.1.

* * *

Delegates from Australia.

This Ninth International Horticultural Congress should be attended by as many delegates as possible from Australia and New Zealand.

We notice from the agenda paper that Mr. H. J. Rumsey, of N.S.W., is attending and giving a paper on "Horticultural Progress in Australia."

We would be glad to hear of other interested horticulturists who are attending.

TREES —A Few or A Truckload.

That Produce Finest Fruit

Whether you want just a few trees for a family orchard or a truckload for big acreage, you will find our trees the best investment.

We've been supplying the growers of Australia for 41 years. Many of the heaviest bearing and most profitable orchards in the land prove the quality of trees propagated in our nurseries. Ask us for quotations on all varieties of fruit and nut trees.

Remember! Good Trees
Are Scarce—
Order Now!

and be sure of obtaining your supplies for the Winter plantings.

New Catalogue FREE

The 1930 Catalogue is better than ever, containing a great deal of very useful information for growers, and details of the numerous Goodman varieties.

Orders sent in now will be delivered whenever you wish, all trees being carefully packed for safe travelling.

Remember Goodman's whenever you think of Fruit Trees.

C. J. GOODMAN
PICNIC POINT NURSERIES BAIRNSDALE
VICTORIA
Post Office Box 47

(W. McF.)

COOPER PRODUCTS

I UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

N.S.W.—
William Cooper & Nephews (Australia) Limited, Sydney, and Agents.

Victoria—
Cooper Engineering Co. Ltd., Melbourne.

Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

Dried Fruits.

Export Quota 90 per cent. for Sultanas and Currants.

The Minister of Markets and Transport has determined, on the recommendation of the various State Dried Fruit Boards, that holders of licenses to transfer dried vine fruits to interstate places under the provisions of the Commonwealth Dried Fruits Act shall be required to market outside the Commonwealth the following percentages of the 1930 season's crop handled by them:—Currants, 90 per cent.; Sultanas, 90 per cent.; Lexias, 85 per cent. The trading interstate of dried vine fruits is prohibited, except under license issued under the Commonwealth Act by the Dried Fruits Board, and it is a condition of the license that the licensee shall market outside the Commonwealth such percentage of the output of dried fruits produced in any particular year as the Minister, on the recommendation of the Dried Fruits Boards, from time to time determines.

N.S.W. HOME QUOTA REGRETTED.

At a meeting of the Federal Executive of the Australian Dried Fruits Association held at Mildura on March 30, regret was expressed that the New South Wales Dried Fruits Board had declared a home quota in excess of the other States.

The Board decided to cease its endeavors to maintain a distinctive Australian price in that State.

It is desired that the Commonwealth Government accept the stabilisation proposals recently submitted.

The personnel of the Board of Management is to be increased from five to seven members.

BERRI CO-OPERATIVE PACKING SHED.

Extensive Improvements.

THERE has recently been much activity at Berri, in improving their packing shed. It is estimated that about £2,000 will be expended in these improvements. A dual automatic feeder and blender is being installed, this being the first of its kind to be installed. Other additions are automatic weighing machines, the "Draper" press, and a new nailing machine. The dust nuisance is to be combated by installing a motor and suction fan to draw the dust from the tower. Then it is forced through a flue to a water screen some distance from the shed, and then drained away.

A fruit-washing machine, driven by motor power, has been permanently installed.

There is a sweat box compound at the rear of the main shed, and 4,000 new sweats have been manufactured. Sweats are washed in a strong disinfecting solution in order to safeguard from grub infection.

There is an extension of 50 ft. x 100 ft. at the rear end of the shed for a smaller grading plant. Here a small Brockhouse machine works in conjunction with a Trummel grader. This will handle the stone and vine fruits in the later stages of the season.

Considerable floor space has been saved in the main building by the erection of a new shed for the storage of box timber. — "Murray Pioneer."

MILDURA DISTRICT CITRUS.

"The Big Four."

The Mildura and district branch of the V.C.C.A. has adopted a neat label featuring "The Big Four." This indicates the four districts of Mildura, Irymple, Merbein, and Red Cliffs. The design also calls to mind the British Economic Mission, "The Big Four," who recently visited Ausralia and prepared a most valued report.

COLD STORAGE OF GRAPES.

The storage of juice Grapes in the frozen state has been the subject of considerable experiment in California, in order to relieve the acute situation that has resulted in the last few years from over-production of this fruit. Last October a quantity of Grapes was picked, frozen in barrels, and held in this state throughout the winter. Late in March three tons of these Grapes were shipped as a test to the Department of Commerce Offices in the Far East. It is said that for juice purposes, the Grapes are as good, or even better, than on the day they were picked. Arrangements have also been made to store a large part of this year's crop in four cold storage houses in San Francisco, instead of moving the whole crop to the market as fast as it is picked.

WINE BOUNTY.

The Federal Government decided to increase the Excise Duty on wines to 5/- per gallon, and to pay a bounty of 1/9 per gallon on wines exported.

The request that the higher excise duty should not operate till September 1, was refused.

Mitcham (Vic.), Show.—The Eastern District Fruit and Flower Growers, as well as the ambitious housewives and families have felt that some part of their routine has collapsed during the years following the suspension of the erstwhile Ringwood Shows. Encouraged with the former success of the Ringwood Exhibitions, the Mitcham Diggers have launched an Autumn Show to be staged at the Memorial Hall, Mitcham, on Saturday afternoon and evening, April 5. There are encouraging indications for the interest and support of some of the best growers of fruit and flowers of the eastern districts, has already been secured. A good display of fruit in the 24 sections, should result. There are 62 sections for flower growers, as well as the usual items embracing homecraft, without which a show in the eastern districts, noted for the industry of the homes, would indeed be lacking. Schedules may now be obtained from the Honorary Secretary, Mr. E. V. Panelli, Doncaster East-road, Mitcham; attention is directed to advertisement in this issue.

Goodman's Catalogue.—We acknowledge having received the 1930 descriptive catalogue issued by Chas. J. Goodman, Picnic Point Nurseries, Bairnsdale, Victoria. This catalogue contains lists of well-grown fruit trees offering, including:—Apples, Pears, Plums, Cherries, Peaches, Apricots, Prunes, Citrus, berry fruits, nuts, etc. Planting hints are given, including some interesting suggestions for 1930 planting. The catalogue is nicely illustrated. Copies obtainable on early request to Mr. Chas. J. Goodman, Picnic Point Nurseries, Bairnsdale, Vic.

Husband (feeling a twinge in the back while he is tuning in the wireless receiver): "I believe I'm getting lumbago."

Wife: "What's the use, dear? You won't be able to understand a word they say."

Oils for Summer Sprays.

Interesting experiments in the use of oil sprays for assisting codlin moth control are to hand by courtesy of Lawford's Fruit Exchange Pty. Ltd., Doncaster, Vic. The experiments were carried out by the Western Co-operative Oil Spray Project.

The members of the Western Co-operative Oil Spray Project, comprising the experimental stations of California, Idaho, Montana, Oregon, Washington, and British Columbia, and the United States Department of Agriculture, wish to make the following suggestions regarding the use of oil sprays on fruit trees in the North-West, with particular reference to Apples and Pears. These suggestions are based on data accumulated from experimental work during the past three years.

Oils for Summer Sprays.

The following suggestions are made to growers who are planning on using oil sprays for codlin moth control:—

1. The number of applications of summer oils should not exceed three, and under most conditions not more than two are advisable.
2. The use of oils alone has not given control of codlin moth. Oils should be used only in combination with lead arsenate or nicotine sulphate.
3. Oils in combination with lead arsenate should be applied during the height of the egg-laying period of the first brood, but if sulphur sprays are applied after the dormant period, no oil should be used in the first brood sprays.
4. Because of difficulty in removing spray residue, the oil-lead arsenate combination should not be used after July 25 (February in Australia), but the oil-nicotine sulphur combination may be used after this date.
5. Oils ranging in viscosity from 65-75 have proven most satisfactory, except that for Newtons or other varieties susceptible to oil injury the viscosity of the oil should not exceed 55.
6. Oils with a sulfonation test not less than 85 are satisfactory.
7. Caution: Oils in combination with lead arsenate should not be allowed to stand in pipes or spray tanks, but should be applied immediately after being mixed. Fruit sprayed with this combination after the spray has been allowed to stand in tanks or pipes for some time, can be cleaned only with great difficulty. This spray mixture is also ineffective in control.

VICTORIAN FRUIT EXPORTS.

394,307 Cases up to March 22.

Up to March 22, 1930, 394,307 packages of fruit had been exported from Victoria during the present export season, the details being:—Apples, 342,774 boxes; Pears, 50,622 packages, Plums, 911 packages. As the estimate for this period was 455,500 cases, it will be noted the actual exports did not reach these figures.

The destinations were as follows:—London 175,088 packages, Hull 42,905, Liverpool 59274, Glasgow 22,822, Hamburg 94,036, Gothenburg 100, Dunkirk 82.

"HARVEY"
Tunnel Dehydrator

The
Latest Idea
in
DRYING
FRUIT
VEGETABLES
and
Other Products

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BOX HILL, E.11. - - VICTORIA
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DEHYDRATOR

SEND YOUR

APPLES, PEARS, ETC.

TO

T. S. JOHNSON & CO.

Fruit Salesmen

ESTABLISHED IN

Liverpool, Manchester, Hull, Leeds, Sheffield

This Cup will be presented by **T. S. Johnson & Co.,** For the best exhibit of 4 cases Sturmers' Pippins (2 wrapped and 2 unwrapped), size 2½ inches, to be competed for at
GRAND AUSTRALASIAN FRUIT EXHIBITION,
to be held at
HOBART, MAY, 1930.

A population of 40 million people, all large fruit eaters, is reached through these centres.

Some Good Reasons why Australian Fruit should be sent to

Liverpool Manchester and Hull

(1) These ports serve the large populations in the North and Midlands of England, also Scotland, Ireland, and Continental Markets.

(2) Some of the largest coal fields are situated in these centres; the hard-working population are big fruit-eaters.

(3) Quick unloading and despatch of fruit are provided.

(4) Cold storage facilities are available.

(5) Direct shipments to Liverpool, Manchester and Hull save extra handling charges as is the case when fruit is transhipped from London.

(6) Shipments should be made to T. S. Johnson & Co., because they give you the choice of the three ports and their efficient selling Organisations which are established therein.

(7) T. S. Johnson & Co.'s regular circle of buyers and wide distributing channels enables them to secure highest prices.

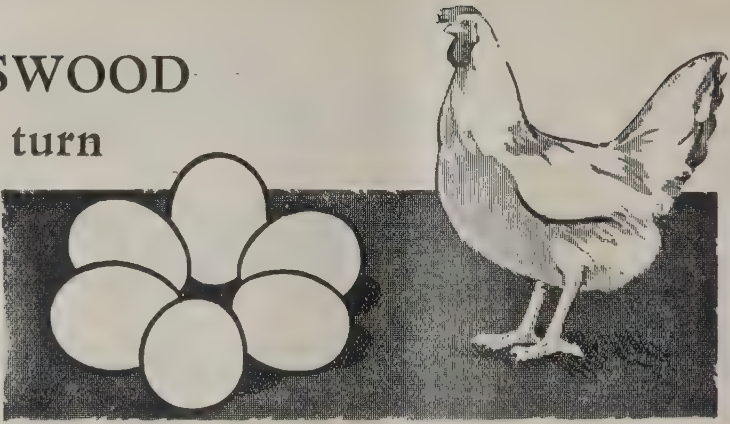
(8) The way to develop new markets is to concentrate on those British outports which are earnestly striving to increase their trade in fruit with Australia.

WRITE FOR ADDITIONAL INFORMATION.

AGENTS:

VICTORIA.—Messrs. J. B. MILLS & CO., Aberdeen House, 528 Collins St., Melb.
TASMANIA.—Messrs. E. R. COTTIER PTY. LTD., 82 Collins Street, Hobart.
AGENTS WANTED FOR SOUTH AUSTRALIA AND WEST AUSTRALIA.

A dash of KARSWOOD in the mash will turn hens into EGG-LAYING MACHINES



The manufacturers of Karswood Poultry Spice do not ask you to accept their word that Karswood is a wonderful egg-producer. They know that the public is always rather sceptical about the claims of a manufacturer for his product. That is why their policy is to publish statements of those best entitled to speak—those people who have used and tested the product. This policy makes the advertisement writer's task an easy one—he can let the other fellow do all the talking. And below are a few samples of how they do talk! Thousands of these letters are received annually, and they all tell the same story: Increased egg-production with Karswood. Yet Karswood does not force, because it contains no forcing ingredients such as cayenne pepper, gentian, chillies, etc.; but it does contain ground insects, the birds' natural tonic stimulant.

"Wonderful Increase in Egg Output"

Gentlemen,

I have used Karswood in England when I was only a "Backyarder." I came out here some 8 years ago to take up Poultry and Pigkeeping. I now have a small flock of 70 hens—about 65 White Leghorns and 5 Black Orpingtons, in their 2nd and 3rd seasons. I keep them in a large run—about ¼ of an acre, and let them out for a run every day for two hours or so. I took up Karswood again on the 26th June of this year. I feed 8 lbs. of pollards wet in the morning with your allowance of spice, and 8 lbs. of wheat at night. After some 8 weeks of this I have had to reduce these quantities to 6 lbs. each. In addition they get a good picking of grass etc. when they are let out, and twice a week they get all the vegetable trimmings from my small stock. Up to the present I have noted the egg yield as follows:

	Last Year	*This Year*
June	253	92
July	242	427
August	679	1166

(The number of hens was the same both years—in fact they are the same birds.) To date the yield for September is in excess of last September; but will write later.

Yours faithfully,

(Sgd.) G. GUMPRICH, *Pinjarra,*
17/10/29 *Western Australia.*

"Keeps Birds in Splendid Condition"

Dear Sir,

We have been using Karswood Spice for a period of four years. Our fowls are now six years old and last year we had an aggregate of 2,282 eggs from 12 fowls ending the nine months—an average of 7 eggs a day. The Spice keeps the birds in such splendid condition and is very helpful to them during the moult. They are at present looking very well and red and I think they will again shortly be laying so you see people tell you that fowls do not lay after 3 or 4 years old but we have this good proof which should be proof enough. We have found Karswood to be absolutely everything that is claimed for it by the manufacturers and we are more than pleased to strongly recommend it to all our friends and everyone who keeps fowls. Trusting you will use this letter as you wish.

Gratefully yours,

(Sgd.) MRS. J. A. MARCHANT, *Lagoon St.,*
23/6/29 *Narrabeen.*

Note the Economy

1/- packet supplies 20 hens for 16 days; 2/- packet supplies 20 hens for 32 days; 13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

1.M.30

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

Poultry and Beekeeping
MCT

NEW ZEALAND'S HONEY INDUSTRY.

For the year ending 30/6/1929. New Zealand exported 2,565,795 lbs. of honey, valued at £89,241, as compared with 1,975,300 lbs., valued at £64,529, in 1928.

In 1928, Great Britain imported 20,871 cwts. of honey from New Zealand, valued at £77,848. Her total imports were 70,951 cwts. having a value of £200,000.

VEGETABLES FOR POULTRY.

Vegetable fare is the salt of life to domestic poultry. Naturally, fowls are enormous eaters of fresh grass, and when unable to obtain plenty of this they must be given a substitute in the form of fresh vegetables. When possible, give them the outside leaves of cabbages, cauliflowers, or lettuces at midday. As well as green stuff, root vegetables are of importance, as they contain salt and other properties which will keep the birds bright and active. A swede-turnip cut into halves and hung by a string from the roof of the run will be appreciated. Other roots which may be chopped and boiled and added to the mash are carrots, beet and parsnips. Potatoes are starchy and fattening, and should be given in moderation. The peelings from this vegetable can be boiled in the stockpot and may be added to the mash, as also the parings of fruit, tops and tails of onions, turnips, and the like. Even bread-crusts, when simmered, have a certain vegetable value, but don't overdo the bread ration. A valuable green food in warm weather is the nettle, which has a cooling action on the blood. The best way is to chop it up and boil it with the scraps to be added to the mash. If you can divide the fowl-run into two sections, sow a crop of green feed in the one not in use. Oats sprout quickly, and when a few inches high the poultry can be turned on to it. This is a good plan for sweetening ground which has been in use for some time.

General Management.

Questions:

"A.V.M." (Murrumbeena) writes:—

Could you please enlighten me as to the following queries on poultry?

(1) Fowl, about eighteen months old, laid for three days in succession eggs which were very small and misshapen; on being examined, they were found to consist of whites only. What is the cause of above?

(2) Pullet, five months old, W.L .breed, laid brown-colored egg. Is this abnormal or otherwise?

(3) Pullets at night have practically nothing in crop. What is the reason for this? (Ration shown below.)

(4) House, 8ft. x 6ft., with run 14ft. x 8ft. What is the limit of carrying capacity for laying pullets or fowls?

Ration given to query No. 3.—Bran 1 part, pollard 2 parts, meat meal 5 per cent. of mash, all by weight, and given as dry mash, available all day. Shellgrit, charcoal always available. Wheat 2 oz. at night per bird, greenstuff at night—silver beet, young oats, and cabbage leaves.

I have your journal every month, and would not be without it, as I personally have obtained a great deal of information from it.

Answers:

(1) This fowl has been apparently suffering from a temporary stoppage in the functioning of the ovary, due to some individual weakness which would cause the fowl to gradually cease laying. When she begins to lay again after a rest, it is possible that the eggs will become normal; if not, she should be killed.

(2) This is certainly abnormal. Sometimes White Leghorns will lay a slightly tinted egg, but if the egg referred to is definitely brown in color, it is evidently due to some hereditary throwback to another brown-egg producing breed. In that case it would be advisable not to use the bird for breeding purposes.

(3) From the fact that your pullets' crops are empty at night it is apparent that they are not eating an evening meal. Your ration seems to provide all that is required, and the birds are either infested with vermin. which will put them off their food, or else they need some palatable variation in diet. This shoudl be provided by varying the wheat with a mixture of stout Algerian oats, while the addition of 1 per cent. cod liver oil to the morning mash might also assist. Without further information, it is impossible to say if the birds are affected with anything, such as worms. You did not even mention if the pullets are laying or not.

(4) Provided the birds get access to the run regularly, a house 8ft. x 6ft. with a run 14ft. by 8ft., would be sufficient to comfortably house 20 birds. In cases where the birds are kept shedded, however, it is advisable to allow 4 square feet of floor space for each bird.

BEEKEEPING.

To ensure that the bees are kept warm through the cold weather, it is absolutely necessary that the frames should be covered with good mats—three or four for each hive. Ordinary cornsacks cut into pieces the size of a zinc queen-excluder, answer the purpose admirably, and are very durable.

Avoid using calico mats as these are next to useless for wintering purposes.

The mats must fit exactly over the frames; if too small they admit draughts, and if too large the edges will protrude beyond the hive covers and in wet weather these will absorb sufficient water to cause the mats to become damp and unhealthy, and the combs mouldy.

Clear away weeds and long grass. Raise hives from the ground at least the height of one brick.

Give the hives a coat of paint, and stop all cracks in the super. See that there are no leaky hive covers.—E. A. Earp, in N.Z. Journal of Agriculture.

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BARKER, GREEN & PARKE PTY. LTD., 533 Collins St., Melb.
Tasmanian Rep. H. JONES & CO. LTD., Old Wharf, Hobart

Pass the Fruit, Please!

There was a scene outside the theatre. An attendant had just ejected a youth from the gallery, and a policeman came along to see what the argument was about.

"It's all right!" said the attendant. "He's been misbehaving himself, so the manager 'ad 'im thrown out!"

"But," said the indignant youth, "I was only passing some fruit to a pal of mine—can't I do that?"

"No, you can't!" said the attendant. "Not when you're in the gallery and your pal's in the pit, and the fruit is a rotten Tomato!"

* * *

And, of course, it doesn't settle the argument as to whether a Tomato is a fruit or a vegetable.

Fruit Trees.—Messrs. L. P. Rosen & Son, are booking orders for all kinds of fruit trees, including citrus, of which 100,000 are available. Of these, 10,000 Valencias are from buds supplied by the New South Wales Bud Selection Society. Catalogues are obtainable, post free, on early application. In addition to citrus trees, the firm has other fruit trees, also roses, Kunde secateurs and knives. This old established nursery firm, previously of Epping, conducts the Fernhill Nurseries, Pennant Hills-road, Carlingford, N.S.W.

Co-operative Box Co. of Victoria Ltd.
BOX WORKS: YARRAVILLE AND WARRNAMBOOL

We have the Largest and Best Equipped Box Factory in Australia.

Fruit Cases of All Descriptions
Out of Imported Softwood.

CANADIAN STANDARDS, BUSHELS, DUMPS, GRAPES, SWEAT BOXES, ETC.

OBTAIN OUR PRICES

IN TRUCK LOADS FROM OUR OWN RAILWAY SIDING.
SPECIAL QUOTATIONS FOR LARGER QUANTITIES

Co-operative Box Co. of Victoria Ltd.
Somerville Road, Yarraville, W. 13.
Telephone: Footscray 285. Telegrams: Coboxco, Yarraville.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.
Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
McKean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear F W., 49 William Street.
H. Wilson, Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.
Young, J. H. & Co. Pty. Ltd., Western Market.

QUEENSLAND.

Brisbane.
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J. & Co., Fruit Markets.

TASMANIA.

Hobart.
E R. Cottier Pty. Ltd., 88 Collins St.
Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters. and at London.
Launceston.
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.
Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.
Guerra & Co., Long Acre, Covent Garden.
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull.
Connelly Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.
Manchester.
The Port of Manchester, rep., W. J Wade, 8 Bridge Street, Sydney.
Liverpool.
MacGeorge & Jardine.
Woodall & Co.
Bristol and Southampton.
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin.
Connelly, Shaw Ltd.
Glasgow.
Russell, Turnbull & Co.

GERMANY.

Bremen.
Fruchthandel, Gesellschaft
Hamburg.
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof Heinz-Tiencken.
Gustav Bey, Hamburg.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn

HOLLAND.

Amsterdam and Rotterdam.
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen.
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

Overseas Markets.

Great Britain.

London (Covent Garden) (13/2/30).—Apples: Oregon Newtown, 15/- to 18/6 per case; Cal. Newtown, 15/- to 16/-; Winesaps, 11/- to 12/6. Pears: Comice, 16/6 to 17/6 half case; d'Anjou, 25/- to 26/-; W. Nelis, 21/- to 23/-.

(Spitalfields) (11/2/30).—Apples: Cal. Newtown, 14/6 to 15/6; Oregon, 14/- to 17/-; Winesap, 9/6 to 11/- per box. Pears: American W. Nelis, Californian, 20/- to 22/-; Wash., 15/- to 17/-; B. d'Anjou, 23/- to 25/-.

Glasgow (13/2/30). — Winesap, fancy 11/6 to 12/6, ex. f., 12/- to to 13/-; Delicious, fancy 14/6 to 15/-, ex f. 15/- to 16/-; Newtown, 15/6 to 16/6 and 17/- per case. Pears: Clapp's Favorite, 3/6 to 4/6 per box. Plums: Santa Rosa, 3/6 to 4/-; Gaviota, 3/6, 4/- and 5/-; Wickson, 4/-, 5/- and 6/-.

Bristol (12/2/30).—Oranges: Jaffa, best 144 and 180, 15/- to 17/- per box; Valencia, 240, 9/- to 12/-; 300, 10/- to 12/-; 360, 10/- to 12/-; 504, 11/- to 13/-. Pears: Cal. W. Nelis, 22/- to 26/-; Cal. B. d'Anjou, 25/- to 30/- per case. Apples: Jon., 11/- to 14/-; Romes, 11/- to 13/-; Winesap, 13/- to 14/- per box.

Edinburgh (12/2/30). — Apples: Ore. Newtown, 15/- to 16/-; Cal. Delicious, 14/- to 15/-; Winesap, 11/- to 12/6 per case. Oranges: Val., 240, 11/- to 12/6; 300, 10/6 to 13/-; 360, 10/- to 11/-. Pears: Cal. W. Nelis, 22/- to 24/-.

Hull (12/2/30). — Apples: Wash. Winesap, ex. fancy, 175, 11/- to 11/6; 180, 11/-; 200, 11/- to 11/6; 216, 10/6; fancy, 198, 10/3; 216, 10/3.

Germany.

Hamburg (13/2/30).—Ph. Astheirmer & Sohn, Hamburg, report as follows:—American boxed Apples not in demand, buyers preferring cheap Apples, such as Russian and home-grown fruit. It is expected Russian and German Apples will be sold out within a few weeks. Prices were realised:—Winesaps, 138/163, ex fancy 12/- to 13/-, fancy 11/6 to 11/9; Romes, ex fancy 14/- to 15/3, fancy 12/3 to 13/-; Newtowns, 150/163, ex fancy 17/- to 18/6, fancy 16/- to 16/6.

New South Wales.

Sydney (26/3/30).

The State marketing department of the N.S.W. Department of Agriculture, reports business generally dull, but improving. Apples, Jon. and G.S., 4/- to 10/-; Tas., Alex. and Worcester, 5/- to 8/-; choice Jons. in demand. Pears, Williams 3/- to 6/-; better demand for Packhams, 3/- to 7/-, choice to 8/-. Victorian Peaches, sales slow, 2/- to 4/- per half case. Plums, scarce, 2/- to 6/- per half case.

Citrus Fruits.—Quiet demand for Oranges and Mandarins, the latter eased in price. Lemons scarce and prices improved. Prices, Oranges, Navel, 2nd crop, 3/- to 10/-, other 2nd crop, 2/- to 7/-; Mandarins, 4/- to 11/-; Lemons. 5/- to 9/-, improving to 6/- to 12/-.

Bananas.—Special 28/- to 32/-, choice 26/- to 28/-, standard 20/- to 24/-, plain 12/- to 16/-. Pineapples, 8/- to 10/- for smooth, 6/- to 7/- for other quality. Passion Fruit, 18/- per half case. Grapes, Black Muscat, 4/- to 12/-, other black, 3/- to 7/-; white varieties, 2/- to 7/- per half case.

Victoria.

Melbourne (31/3/30).

The following wholesale prices are supplied by the Wholesale Fruit Merchants' Association of Victoria, for average quality fruit:—Apples, good to choice eating, 2/6 to 4/6; do., cooking, 2/- to 3/-; Bananas, green, Queensland, special 29/-, choice 28/-, standard 23/- to 27/-, plains 18/- to 22/- per double case; Passion fruit, 13/- per half case; Peaches, only a few white flesh selling. There is no demand for yellow flesh. Pears, 1/- to 4/-, demand is very limited, and cool store stocks are only very slightly reduced. Metropolitan districts supplies are very heavy; Pineapples, Queens, 7/- to 9/-, odd special, to 10/- per double case; Tomatoes, Victorian, 4/- to 5/-, few special brands 6/- to 8/-; Grapes, good quality, to 10/-, some special sorts higher, medium from 6/-. The market was lightly supplied.

The Melbourne manager of the Federal Citrus Council of Australia reports that the Lemon market is dull. Medium counts, best country Lemons, are selling at up to 14/- a case. There is practically no demand for lower grade or small Lemons.

Tasmania.

Hobart (29/3/30).

Grav. 2/6 to 5/6, W.P.M. 2/- to 5/-, Alex. 2/- to 3/3, Alfristons 2/- to 3/-, A.P.M. 1/6 to 2/6, N.Y.P. 2/- to 3/6 per case. Pears: W.B.C. 1/6 to 4/-; G.B. 2/- to 5/-, B.B. 2/6 to 5/6, other varieties 1/- to 3/-. Peaches, 3/6 to 5/6 per half case.

West Australia.

Perth (27/3/30).

Apples: Dunn's Seedling, flats 3/6 to 6/-; dumps 5/- to 10/-, Jon. 4/6 to 9/-, 8/- to 16/- (inferior from 4/-); Cleo. 2/6 to 6/-, 6/- to 9/6 (inferior from 3/-. Oranges: Plain, flats 10/- to 22/6, dumps 15/- to 27/-. Pears: Bartlett, 7/- to 15/-, other varieties 2/- to 9/-.

Queensland.

Brisbane (29/3/30).

Locally grown Navel Oranges, 10/- to 14/- per case. Apples: Jon. 7/- to 11/6, Del. 8/- to 11/-, Munro's 4/- to 6/-, Demo. 8/- to 10/-, Yates 9/-. Pears: Stanthorpe, Williams 5/- to 9/-, P.T. 5/- to 6/- per bushel case.

New Zealand.

Dunedin (13/3/30).

Reilly's Report.—Full supplies of fruit and produce available. American Oranges, Tangerines and Lemons arrived in perfect condition. We received and sold:—Apricots, cases 10/6, crates 7d., 9d.; Peaches, cases 5/-, 7/-, crates 4d., 6d.; Nectarines, cases 5/6, 7/-, crates 4d., 6d.; Greengages, 8/6, crates 4½d., 5d.; Satsumas, Plums, 8/6; Raspberries, 9/-, 12/- bucket; Loganberries, 11/-, 12/- bucket; Blackberries, 6d. to 10d. lb.; Cape Gooseberries, 8d. lb.; Cooking Plums, 2d., 3d., dessert 4d., 6d.; Grapes, locals 1/2, 1/4, Kakanui 1/1, 1/3; Tomatoes, local 7d., 10d., Canterbury 2d., 5d., Otago Centrals 4d., 6½d.; Apples, Gravensteins 5/-, 7/-, Coxes 8/-, 10/6, other desserts 4/-, 7/-, cooking 4/-, 6/6; W.B.C. Pears, dumps 6/-, 8/-, halves 3/-, 4/6; Conference Pears, 7/-, 8/-.

Oranges, American Navels, to arrive, 47/6 to 52/-; Mission Lemons, 50/-; Grapefruit, 40/-; Bananas, ripe repacks 35/- per case.

VISITORS FROM NEW ZEALAND.

Miss Lucie Reilly, of Reilly's Produce Mart, Dunedin, accompanied by Mrs. Jeffrey, visited Australia during March. Several fruit districts in South Australia and Victoria were visited. Appreciation was expressed for the quality of Oranges from South Australia.

* * *

Grapes and Citrus Wanted.

Writing under date March 1, Reilly's Produce Mart, Dunedin, state:

We anticipate a steady demand for Grapes in the vicinity of 20/- to 22/-. Lemons in the vicinity of 18/- to 20/- for choice quality. Mandarines: Adelaide and Renmark Mandarines we anticipate 22/6 to 24/-, and with Oranges, choice Navel Oranges packed in 40 lb. cases, arriving in this market in good order, realising the following prices:—

Large fruit packed 60 to 90 to the case should average 18/-, fruit packed 90 to 140 to the case should average 20/-, fruit packed from 140 to 200 should average 22/6.

Pumping Plants, Engines, etc.——

We are recognised as Specialists in
engineering jobs for orchard and farm
Consult us for your requirements

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BOX HILL

F. W. MOORE & CO. LTD., LONDON.

Sir R. Eccles Snowden Now Managing Director.

Sir R. Eccles Snowden, K.B., who for the past five years has been Tasmanian Agent-General in London, has been appointed managing director of F. W. Moore & Co. Ltd., London. Mr. F. W. J. Moore, after 30 years of service in London, is to enjoy some well-earned leisure, though he remains Chairman of Directors of the company.

N.S.W. MARKET REPORTS.

The N.S.W. Fruitgrowers' Federation is now issuing weekly market reports, computed by their market representative, Mr. P. S. MacDermott.

MARKETING GRAPES.

Members of the Wholesale Fruit Merchants' Association, Melbourne, reported that during early March Grapes were not holding up as well as usual, and the question was raised as to whether irrigation had been applied at the wrong time.

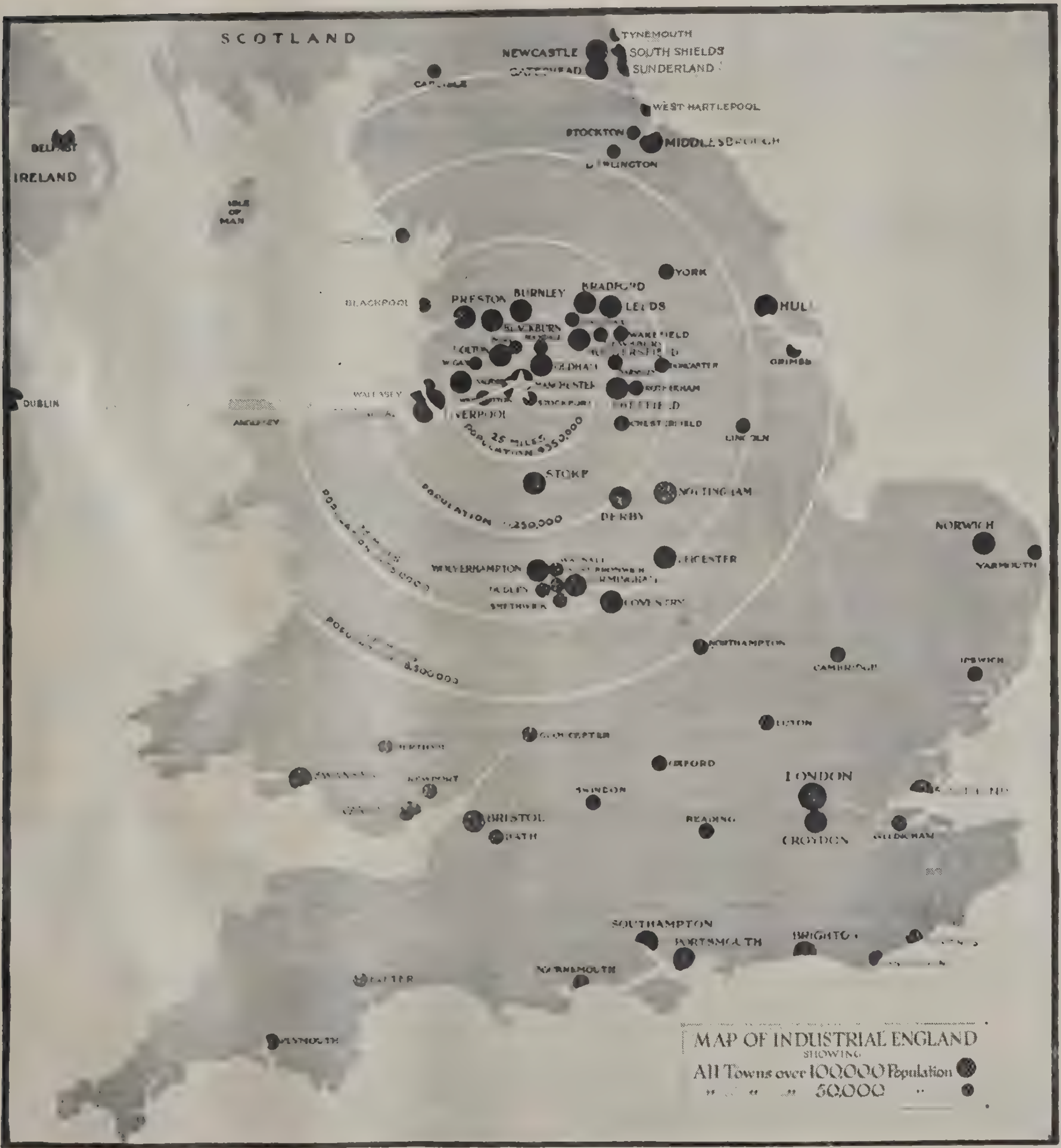
Grapes in Punnets.—A praiseworthy attempt had been made to improve the trade by sending Grapes in punnets in much the same way as is done with Strawberries. Although the attempt was not successful, these plans, it is thought, should not be abandoned. The Grapes opened up bruised, there being many berries shaken off the stalks: buyers did not take kindly to the innovation.

Mr. J. Davis, of the Western Market, suggested that failure was caused by excessive shaking. Apparently the fruit, after picking, had been placed in the punnets and jolted to a railway station for despatch, thus deterioration having set in before the fruit had left the country railway station.

It is hoped that difficulties in this connection will be overcome. Every effort which is made to improve fruit distribution should be encouraged.

LOOK AT THE MAP!

Which Port is the Natural "Clearing House" for all the Principal Manufacturing centres?


SCOTLAND
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OLDHAM
DONCASTER
GRIMSBY
WALLASEY
MANCHESTER
ROTHERHAM
STOCKPORT
SHEFFIELD
LIVERPOOL
CHESTERFIELD
LINCOLN
25 MILES POPULATION 6,350,000
STOKE
NOTTINGHAM
DERBY
POPULATION 9,250,000
NORWICH
YARMOUTH
WOLVERHAMPTON
WALSALL
WEST BROMWICH
BIRMINGHAM
LEICESTER
DUDLEY
SMETHWICK
COVENTRY
NORTHAMPTON
CAMBRIDGE
IPSWICH
POPULATION 8,300,000
LUTON
GLOUCESTER
MERTHYR
OXFORD
SWANSEA
NEWPORT
SWINDON
LONDON
CARDIFF
BRISTOL
READING
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MAP OF INDUSTRIAL ENGLAND
SHOWING
All Towns over 100,000 Population
" " " 50,000 "

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PERSONAL.

Mr. Keighley M. Ward, B.Ag.Sc., has just joined the Science Branch of the Victorian Department of Agriculture, and will specialise in entomology. Mr. K. M. Ward, who is aged 23, is a son of Mr. J. M. Ward, Superintendent of Horticulture, Victoria. We very heartily congratulate them both.

Mr. J. L. Proven, of the Victorian Department of Agriculture, has just obtained his degree of Bachelor of Agricultural Science. He will now specialise on bud selection of citrus.

Orchard Spray Plants.—"Derwent" and "Derwent Junior" spraying outfits are offered by Robert Nettlefold Pty. Ltd., of Hobart, Huonville, and Launceston, Tasmania. The firm advises that 200 of these outfits are used within a 25-mile radius of Huonville, Tasmania, and that users express great appreciation. Details are obtainable on application, together with particulars of other pumps, hose fittings, hoses, etc. The firm will give quotations for stationary plants.

Fruit and Ornamental Trees.—The old-established firm of C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, have a full list of fruit trees, also a splendid range of shrubs and trees for homestead beautification. Their catalogue is of great interest, and copies will be gladly supplied by the firm on application.

"Could you give a poor fellow a bite?" asked the dust-stained tramp.

"I don't bite, myself," answered the lady of the house, "but I'll call the dog."—College Humor.

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Inquiries for Victoria and South Australia.
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Australian Nurseries also at Camden Hurstville N.S.W.

VICTORIAN IRRIGATION COMMISSION.

Interesting Annual Report.

THE State Rivers and Water Supply Commission for Victoria, have issued their 24th annual report. In this report it is stated that the area of country lands within the State artificially supplied with water for domestic and ordinary use and for watering stock is approximately 23,953 square miles, equal to about 15,330,000 acres.

The area under irrigated culture for all kinds of crops was 471,695 acres. Although this area is 5,805 acres less than the area irrigated in the previous year, it is 86,139 acres above the average of the previous five years, and 121,460 acres above the average of the previous ten years. The area irrigated last year includes 17,700 acres watered under yearly permits granting authority to divert water from streams throughout the State.

The decrease in the area watered was almost entirely in the irrigation of cereal and other annual crops, the position in regard to permanent crops under irrigated culture being maintained, and even increased.

It is stated that in the Merbein district the dried fruit returns show an increase on the previous two seasons, returns totalling 11,856 tons, as compared with 6,008 for 1927-28 and 9,850 for 1926-27.

Red Cliffs' District.—It is reported that although the area of vines planted in the Settlement has not materially altered since the last report, the yield of dried fruit was double that of the previous year, being 17,000 tons as compared with 8,500 tons in 1927-28, and 11,000 tons in 1926-27. The lower figure in 1927-28 was caused by frosts and hail seriously damaging the vines. In some cases, individual yields of three tons to the acre were reported.

Citrus fruits were harvested from the young citrus groves that are now beginning to bear profitable crops. Large quantities of fresh Grapes were also marketed.

Owing to the favorable season for drying fruit, a good average quality was produced. There are still areas of young vines to come into bearing.

Nyah.—The dried fruit crop for the season was a record for the district. A total of 3,500 tons of dried fruit was packed by the Nyah Packing Sheds, compared with 2,400 tons for the 1928 harvest and 3,200 tons for the 1927 harvest.

Tresco.—Fifty tons of Lemons have been despatched to factories, while approximately 4,000 cases of Washington Navel Oranges have already been forwarded to market from the central packing shed, and it is expected that 13,000 cases will be handled before the season closes.

The report is signed by Messrs. Wm. Cattanach (Chairman), E. Shaw (Commissioner), Richd. Horsfield (Commissioner), and P. J. O'Malley (Secretary).

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CLENSEL

A Wonderful Insecticide and Fungicide.

Clensel is not a new spray. It is used extensively throughout the world, and has

Won Great Appreciation
In
Australia.

The fruitgrowers' best friend. Non-Poisonous. non-inflammable. Destroys insect and fungus pests: a tonic for trees and plants.
Non-injurious.

Very effective on soft bodied insects. Can be mixed with Arsenate of Lead as a Spreader.

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All consignments for this market will have careful attention and realize highest prices if sent to

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Cheques posted promptly.

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Agents for Hobart: F. J. Bennett & Co., Cr. Elizabeth & Collins Streets
Agents for New Zealand: J. A. Redpath & Sons Ltd., 37 Johnston Street, Wellington.

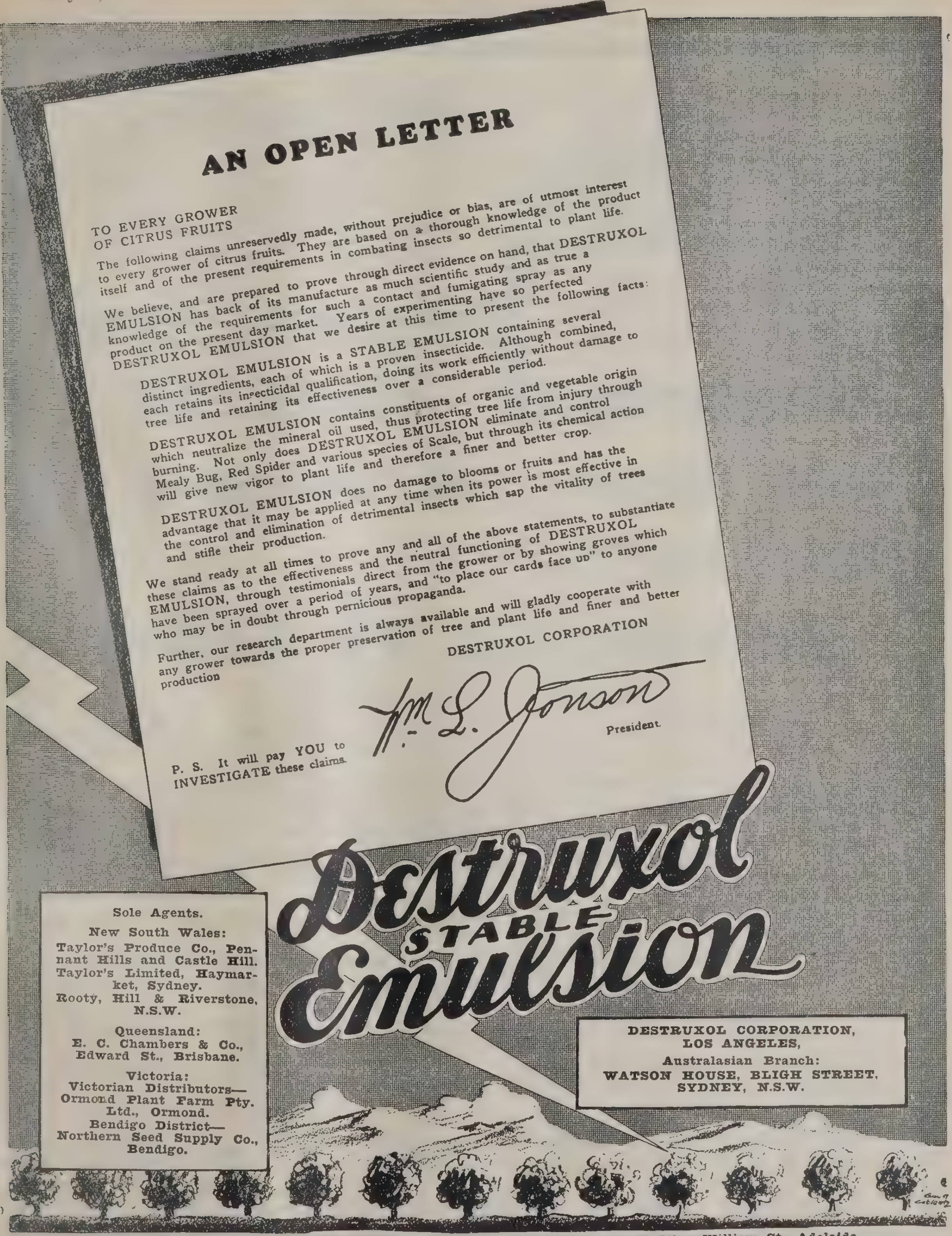
Special Notice to Fruitgrowers

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms:—

H. M. Wade & Co., 471 Flinders Lane, Melb.
T. Stott & Sons, 11 Western Market, Melb.
H. L. E. Lovett & Co., 410 Flinders Lane, Melbourne.
A. E. Pitt, 12 Western Market, Melbourne.
J. Davis Pty. Ltd., 13 Western Market Melb.
W. S. Tong, 4 Western Market, Melbourne.
Silk Bros. Pty. Ltd., 441 Flinders Lane, Melb.
J. G. Mumford, 449 Flinders Lane, Melb.
Golden Valley Fruit Co. Pty. Ltd., 48 William Street, Melbourne.
W. Sweeney Pty. Ltd., 14 Western Market, Melbourne.
J. W. Ross, 6 Western Market, Melbourne.
J. H. Young & Co. Pty. Ltd., 7 Western Market, Melbourne.
David Smith Pty. Ltd., 480 Flinders Lane, Melbourne.
Silbert, Sharp & Davies Pty. Ltd., 17 Western Market, Melbourne.
A. Millis & Sons Pty. Ltd., 5 Western Market, Melbourne.
W. A. Watkins, 62 King Street, Melbourne.
P. A. Patrikeos, 31 William Street, Melb.
R. Renof, 14 Western Market Melb.
G. Woolf & Sons, Western Market, Melb.
F. Cave & Co. Pty. Ltd., 50 William St., Melb.

GROWERS PROTECT YOURSELVES by consigning to members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA.

Correspondence is invited by the Association. **J. D. FRASER, Secretary, 422-428 Collins St., Melbourne**



AN OPEN LETTER

TO EVERY GROWER
OF CITRUS FRUITS

The following claims unreservedly made, without prejudice or bias, are of utmost interest to every grower of citrus fruits. They are based on a thorough knowledge of the product itself and of the present requirements in combating insects so detrimental to plant life.

We believe, and are prepared to prove through direct evidence on hand, that DESTRUXOL EMULSION has back of its manufacture as much scientific study and as true a knowledge of the requirements for such a contact and fumigating spray as any product on the present day market. Years of experimenting have so perfected DESTRUXOL EMULSION that we desire at this time to present the following facts:

DESTRUXOL EMULSION is a STABLE EMULSION containing several distinct ingredients, each of which is a proven insecticide. Although combined, each retains its insecticidal qualification, doing its work efficiently without damage to tree life and retaining its effectiveness over a considerable period.

DESTRUXOL EMULSION contains constituents of organic and vegetable origin which neutralize the mineral oil used, thus protecting tree life from injury through burning. Not only does DESTRUXOL EMULSION eliminate and control Mealy Bug, Red Spider and various species of Scale, but through its chemical action will give new vigor to plant life and therefore a finer and better crop.

DESTRUXOL EMULSION does no damage to blooms or fruits and has the advantage that it may be applied at any time when its power is most effective in the control and elimination of detrimental insects which sap the vitality of trees and stifle their production.

We stand ready at all times to prove any and all of the above statements, to substantiate these claims as to the effectiveness and the neutral functioning of DESTRUXOL EMULSION, through testimonials direct from the grower or by showing groves which have been sprayed over a period of years, and "to place our cards face up" to anyone who may be in doubt through pernicious propaganda.

Further, our research department is always available and will gladly cooperate with any grower towards the proper preservation of tree and plant life and finer and better production

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Wm. L. Jonson
President

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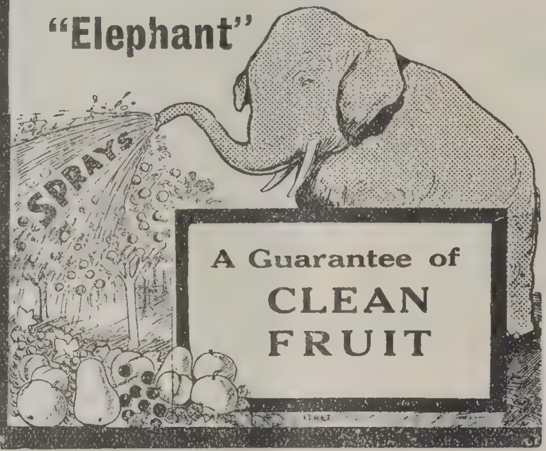

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Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

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We do not hold ourselves responsible for the views expressed by our correspondents.

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Hon. L. SHOOBRIDGE, M.L.C.

Fruit World Annual Appreciated.

Mr. C. G. Savage, Director of Fruit Culture, Sydney, writes as follows:—

"I desire to acknowledge with thanks receipt of the 'Fruit World Annual for 1930,' and congratulate you upon same. The work is extremely interesting, and will be very valuable to me."

TASMANIAN FRUIT SHIPMENTS.

The steamer "Canonesa" sailed from Hobart with 183,000 cases of Apples and 7,000 cases of Pears for Hamburg, Hull, and London, on May 1.

The total shipments of fruit this season are 1,446,544 cases of Apples and 50,311 cases of Pears from Hobart, and 315,484 cases of Apples and 11,108 cases of Pears from Beauty Point. The "Canonesa" was unable to find space for 30,000 cases which were waiting on the wharf.

Till we have reflected on it, we are scarcely aware how much the sum of human happiness in the world is indebted to this one feeling—sympathy. —F. W. Robertson.

Reworking Fruit Trees.

(By P. H. Thomas, Tasmanian State Horticulturist, in Bulletin No. 3, issued by Tasmanian Dept. of Agriculture.)

(Continued from page 137, April "Fruit World.")

Inarching.

INARCHING IS A SIMPLE OPERATION and can be adapted to a number of uses. It is a popular and efficient method for the propagation of certain plants and trees that cannot be raised by the general practices of seeding, cuttings, or ordinary grafting, and is carried out by bringing cut surfaces of two growing plants into contact.

These are tied tightly together, waxed, and allowed to remain in position until the parts have grown together. Separation of the variety that it is desired to propagate is then made from the parent plant, the head of the stock is removed, and a transfer of the variety is effected without suspending any of its functions or growth.

This operation is very seldom necessary to the orchardist, but the principle can be applied in a very beneficial way as a brace for weakly limbs or the main branches of trees that have a lateral growing tendency.

Two strong laterals growing on opposite or contiguous main limbs are selected. The limbs are then brought together by a temporary brace, so as to permit the laterals being entwined The ends are tied and allowed to remain so for a season of growth. The following year it will be found, if the tree is fairly vigorous, that the laterals have grown together. The temporary brace can then be removed, and replaced by the permanent one formed by the tree's own members.

"Inarching" is a method that sometimes is used for purposes of reinforcing or strengthening the rooting system of a tree, which may be necessary through the roots being affected with fungi, or injured from other causes.

In the case of an Apple, a hole is dug in the soil, as near to the main barrel of the tree as possible, avoiding any large roots that radiate from the stem.

A T-shaped incision is made in the bark of the main barrel, about six inches above the soil surface similar to that for budding, only in this case it is inverted. A strong Apple seedling is then selected, and a slanting diagonal cut made at the required height, similar to that used in a tongue graft. The stock is then inserted in the inverted T-shaped incision in such a position that its roots may be covered when the hole is filled. It is then bound in position with raffiia, waxed to keep out the water, and firmly planted against the treated tree.

A number of stocks can be used in this way to reinforce a large tree; in a few years they will establish themselves as a succession of feeders, and develop a new rooting system.

"Bridge grafting" is a very convenient operation that can be used in cases of bark injury caused by rodents or disease. In cases of trees that have been girdled by rabbits,, it is advisable to insert a few bridge grafts to assist healing and to ensure the regular sap flow.

Similarly, it often happens when treating cankers caused by fungus or bacteria that a large area of bark on the main barrel has to be removed, and the wound sterilised. In either case the tree has received a severe shock, and will require all the assistance it can obtain in order to survive.

Bridge grafting is carried out by bringing the upper

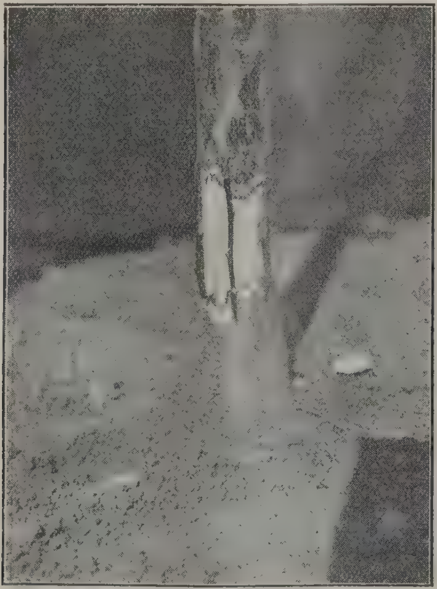

Fig. 15.—Bridge grafting. Tree girdled by rabbits, showing method of bridging wound by means of small scions inserted in a similar method to that detailed for rind grafting.

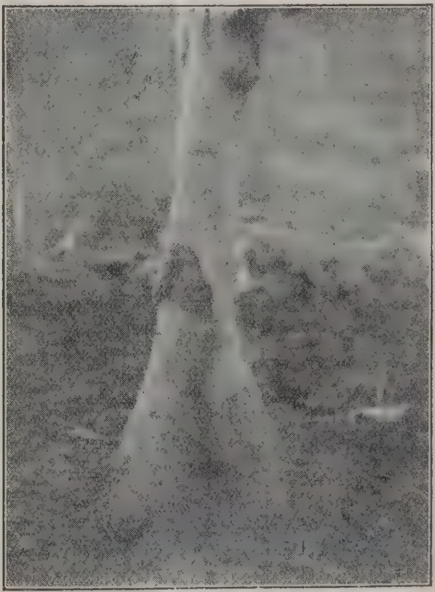

Fig. 16—Inarching. Young seedling stock planted and inarched into tree upon Northern Spy roots.

and lower bark of the wound into communication by means of a number of "bridges" of young wood that are inserted in the green and healthy bark above and below the cut

The scions which are used in the "bridge" should be selected from wood of the previous season's growth, and the operation performed while the tree is in a dormant condition. These should be trimmed a little longer than the space to be "bridged," and cut on the slant at each end in the way detailed for inarching, so that the bevelled points are each on the outside of the scion.

Vertical cuts are then made at opposite intervals above and below the wound, the scions being inserted in the cut, bound with raffia, and waxed to keep out water. In a few years a bridge will be formed over the injured surface, which will ultimately heal and merge into the original bark.

Tree Surgery.

FRUIT trees, besides being prone to the attacks of insect and fungus pests, are often subject to injury from wind storms and the depredations of animals.

In consequence, it is sometimes necessary to remove some portions of the trees or employ methods that ensure the quick healing of wounds.

Tree surgery may be described as the remedial work necessary in cutting out all decayed, diseased, or injured wood and bark, and the processes of sterilisation and waterproofing of the wounds made so that the tree will not suffer to any great extent from the decaying tissue.

Each year the orchardist is generally faced with the necessity of removing certain limbs or portions of the tree for some cause or other. Unfortunately, this operation is often carried out in a rough and unintelligent manner.

The wounds are left exposed to the attacks of fungi, and no assistance is given to them to withstand the shock of the treatment.

Wounds made from various causes require careful attention, and the treatment should be watched from year to year. The work requires the application of scientific principles, and any defects should receive immediate attention.

Operators who possess a knowledge of the structure and physiology of a tree are seldom guilty of neglectful treatment in this way, and one of the surest ways of effecting improvement in method is by instruction on these lines.

When removing decayed, dead, or unnecessary limbs, cutting off stubs left by improper methods of pruning, and treating the wounds and cavities so as to prevent decay and secure proper healing, it is advisable to operate in the following manner:—

Obtain a fairly fine saw, and remove the portion with as little injury as possible to the surrounding bark and cambium The finest saw will leave a rough surface to the cut, so it is advisable to pare a thin layer off with a sharp knife until it is smooth. This will promote more rapid healing, and give more resistance to the lodgment of fungus spores.

The cuts should be made as close to the main trunk or limbs as possible, the object being to remove the limb in such a way as to leave the smallest possible exposed surface to be healed over.

Very often limbs are situated in awkward positions in the tree and require removal. The use of an adjustable saw will greatly facilitate this work. The saw is shaped like a fretsaw, the blade being held in pivots, so that it may be turned in any direction required.

The removal of decayed and diseased bark and wood is best carried out by the use of a sharp broad chisel and metal scraper. If the injury is at all deep-seated it will be necessary to use a light wooden mallet. All injured or partially decayed tissue should be cut away until the wound is ringed with clean green bark.

It is advisable at this juncture to stress the necessity of thoroughly cleansing all tools by dipping or wiping with an antiseptic after treating diseased trees. A weak solution of formalin is as good as anything for this pur-

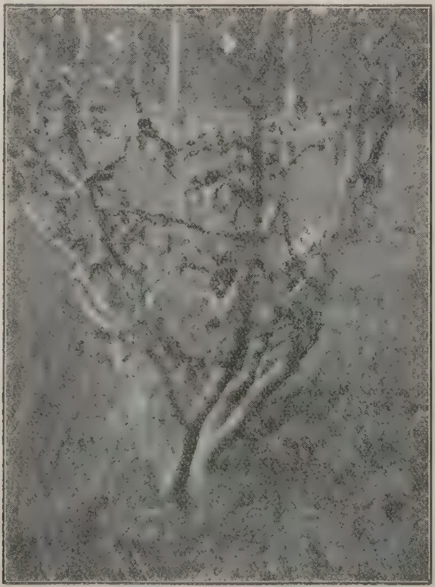

Fig. 17.—Inarching. A useful method of bracing a lateral growing variety.

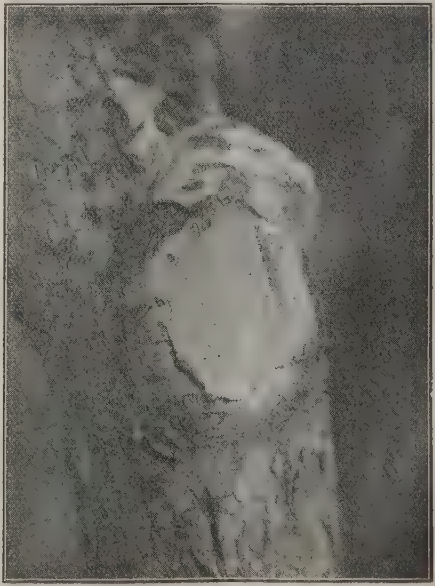

Fig. 18.—Wound cleansed and filled with cement to prevent water entering and decay of heartwood continuing.

pose, and will kill any spores or bacteria that may be transmitted from one tree to another in the process.

Treatment of Wounds.—If left exposed, without any protective covering, the cut surfaces on the tree are very susceptible to attacks of the different fungi and bacteria. There are many different methods of treating these, each being employed according to the cause of the injury.

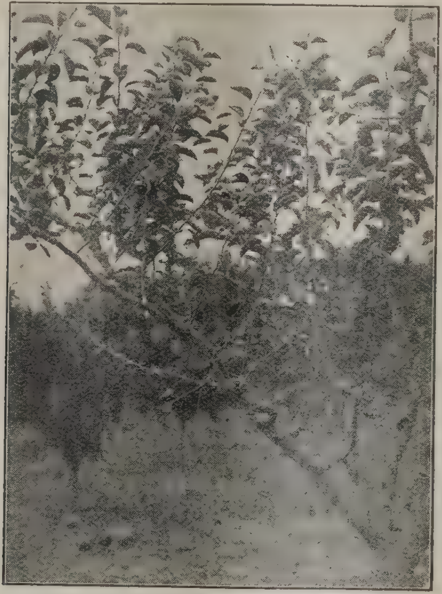

Fig. 19.—Close view of section of tree (Fig. 12), showing laterals budded with new variety. By this method suitable trees can quickly be refurnished with another kind coming early into bearing

For a clean cut surface, caused by removing a limb, ordinary whitelead paint is as good as anything, but in the case of wounds that have been caused by the removal of diseased wood, it is better to employ an antiseptic dressing such as a solution of creosote or coal tar

The former is much to be recommended, as it penetrates into the wood tissues and remains present over a long period.

Some growers have adopted the pratice of driving a few copper tacks into the wood of the exposed cut. The influence of the weather on the tacks spreads a thin film of verdigris over the wound, and the tacks will slowly corrode until they ultimately disappear.

Where this has been tried the results have given satisfaction, and in very few cases have the stubs been attacked by fungi.

Occasionally it becomes necessary to fill up a cavity in a tree caused by the wood rotting from the neglect of old cuts.

In such cases, if left, the rot will slowly permeate the whole tree, leaving a hollow shell that is likely to break at the sightest strain.

The cavity should be cleared of all dead or diseased wood, and the walls treated with creosote. A mixture of cement mortar is made with clean sand in a proportion of 1 to 3. This is tightly put into the hole and smoothed so as to conform to the outside bark, when it will set and seal the cavity.

(The illustrations in this issue and on pp. 94-96 of our March issue, were kindly supplied by the Tasmanian Department of Agriculture.)

SPRAY IRRIGATION FOR CITRUS.

Several leading citrus-growers have recently installed the "Gay" sprinkler irrigation system with success. This system is an Australian invention. It has for several years been adopted throughout Botanic and Council gardens, and its adaptation to the citrus industry has been greatly appreciated.

The "Gay" sprinkler is attached to light, moveable pipe lines for the spray irrigation of citrus groves.

The advantages of the "Gay" sprinkler system over flooding, channelling, and the older methods of overhead watering have appealed to the leading growers of citrus in the Murray River districts. Leading features of this Australian patent are as follows:—1. Accurate breaking up of the spray to gather nitrogen before the drops reach the ground. 2. Distributing the rain evenly by a thoroughly spreading four sprays from one sprinkler. 3. Thorough cleansing of foliage from the peculiar spray action thereon. Full particulars are obtainable from the Gay Sprinkler Agency Co., 91 Rushall-crescent, North Fitzroy, Vic.

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TASMANIA'S EXPERIMENTAL PLOT.

Apple Stocks and Berry Fruits.

The Chief Horticulturist (Mr. P. H. Thomas) furnishes the following report in respect to the progress of the imported Apple stocks and berry fruits at the Kettering plot:—

Apple Stocks.—These were obtained from the East Malling Research Station, Kent, England, a selection being made of the different stocks tested during recent years and which are now being commercially used for propogative purposes.

On the whole, the results this season have been very satisfactory. The plants have made good growth, and sufficient of the different varieties have been successfully established to enable each to be built up and tested under Tasmanian conditions.

Berry Fruits.—The Raspberries imported two years ago from Scotland are now well established, and making good growth. A plot has been laid down in which these may be tested in conjunction with the Tasmanian varieties as to their cropping, period of ripening, disease resistance and commercial utility.

A number of Tasmanian seedlings have also been raised, several of which have fruited and give promise of a good type of berry. Owing to the time of arrival in Tasmania and faulty packing of consignments, it was evident from the outset that serious losses would be experienced amongst the other berry fruits.

These arrived late in autumn, and had commenced growth on the voyage. In spite of every attention, a heavy mortality was experienced, especially amongst the Gooseberries.

However, it is anticipated that sufficient plants have been established to enable some of the better class Red Currants and Gooseberries to be propagated and tested. Several new seedling Strawberries have also been raised and transplanted.

These have made good growth, one or two plants producing fine types of fruit, which will be kept under observation for a further period before planting.

EAT MORE FRUIT.

The Food Education Society of Victoria.

Good Teeth Essential to Health.

Lecturing at the Fruit and Flower Show at the Melbourne Town Hall on April 30, Dr. Geo. E. Payne Philpots, President of the Food Education Society, said: "The public have not fully realised the great importance of the prevention of dental decay, the most widespread of all disease. There could be no doubting the fact that dental decay was a diet deficiency disease, which was greatly helped by neglect in keeping the mouth and teeth clean, and it was now realised that the ending of each meal with **fresh fruit**, especially the Apple, would do more than anything else to stimulate the flow of saliva, which was Nature's way to protect the teeth by removing the fine particles of starch and sugar which ferment in the crevices of the teeth, thus causing their destruction.

The diet must also be reinforced by the careful chewing of wholemeal bread, which contained the lime salts so essential to the formation of strong healthy tooth structure.

When a better realisation of oral cleanliness is obtained and maintained by children and adults, much practical work will be done to prevent rheumatic fever so common with children to-day. It has now been proved that those who suffer from rheumatic fever and rheumatic affections of the joints have had their blood stream leavened by a tiny germ called the Streptococci, and this germ is always found associated with decayed and absessed teeth, and pyorrhea pockets. Therefore, let parents realise the value of spending money on fruit as a great factor in, not only keeping the mouth clean, but helping materially to keep the whole of the alimentary canal clean and healthy, and thus preventing constipation, the mother of all disease.

Let us all eat ten pounds of fresh fruit per person per week, and thus help to preserve our own health and help the men on the land who produce all national wealth.

PEACHES FOR CANNING.

The Question of Improved Varieties.

New Varieties From U.S.A. are Being Tested by N.S.W. Department of Agriculture.

VARIETY IS A VITAL CONSIDERATION in fruitgrowing as in the production of any other crop. The processes incidental to production are the same whatever the variety, the suitability of which is the justification or otherwise for their cost.

A recent statement in this connection shows that the Plant Breeding Branch of the N.S.W. Department of Agriculture is carrying out a series of crossbreeding experiments between standard varieties of canning Peaches with a view to evolving new varieties possessing improved characteristics. The experiments are conducted at the Riverina Welfare Farm of Boys, Yanco, and several hundred seedlings from crosses designed with a specific objective between standard varieties of canning Peaches are being raised each year. The seedlings are raised through the nursery stage at the Department's viticultural nursery at Narara, and it is proposed to grow them to the fruiting stage on the irrigation area.

The postion is also being closely watched to ensure that the Department shall be abreast with any developments pertaining to the creation of new varieties in California. Before any of these are introduced, full particulars as to the characteristics, etc., are collected from the Californian Department of Agriculture and the Berkeley University. As a matter of fact, it is stated, the Department has already imported two trees of the Hause Peach, and these are growing at Bathurst Experiment Farm, but they have not yet fruited.

It is proposed, and arrangements are in hand, to have trees of this variety tested on the irrigation area in due course. In addition, the Department has on order California trees of the varieties Gaume, Halford No. 2, and Dahling. It is anticipated that these three varieties will arrive shortly.

Information was received recently regarding three varieties named Peak, Libbie, and Harris. Peak has already been introduced, and is giving promise of being a good canning sort. Californian reports indicate that Libbie is quite a popular canning Peach in America, but the manager of the Leeton Cannery, who introduced Peak, and who saw the last-mentioned variety (Libbie) on his visit to California, was not impressed with it, as the Peach is of coarse texture and shaded red around the stone. Up to the present, the Department has been unable to get authentic reports as to the value of Harris for canning purposes.

The Stationary Spray Plant.

Electricity for Orchard Spraying.

Equipment Necessary.

(Exclusive for the "Fruit World.")

The first part of this article appeared in the "FruitWorld" for March, 1930.

Location of Plant.

THE EXACT LOCATION of a stationary spraying plant in an orchard will be largely determined by the available water supply. The stationary system requires more water for operation than the portable plant method, in that the pipes have to be thoroughly flushed out both before and after spraying. The ideal location for the water supply is above the spray plant so that the water can be obtained at the mixing tanks by gravity. If there is no source of supply so located, it is advisable to pump water to a tank or reservoir at the desired elevation rather than locate the plant near the source of water, and then have to pump the spray liquid up hill under heavy pressure. The force of gravity should be employed in every possible way. It is also advisable to have large pipes from the supply to the mixing vats so that the latter may be filled quickly.

Water being available, a high point in the orchard is the best location for the plant. Gravity pressure is thus taken advantage of and a lower pressure is sufficient at the pumps.

A further consideration is the advantage of proximity to a power line. Electric drive necessitates an overhead line to carry the energy, and the shorter this can be made the better the voltage at the pump. It should be remembered that even if an engine driven plant is installed, owing to the absence of power supply, it is possible that mains may be passing the property in the course of a year or two and a change over to the simpler and cheaper drive could then be made.

The Power Plant.

The electric motor is, par excellence, the ideal power unit. Should, however, electricity not be available, oil or petrol engines may be used, though in this case the purchase of a secondhand engine may be advisable so that when electricity becomes available a replacement may be made without excessive loss. Sufficient reserve power should be installed so that the motor or engine does not have to work at full capacity at all times. Unless the plant is situated in a low-lying position and the spray solution has to be forced up to a considerable height, a 5 h.p. motor will be found ample for orchards of up to 30 acres. In many cases in the United States considerably greater areas are covered with plants of this size. Should an engine be used, not less than 7½ h.p. should be installed.

A 5 h.p. single-phase motor costs, with its starting gear, about £60. If, however, a three-phase supply of energy is available, a suitable 5 h.p. motor and starter will cost only £40. The power should be transmitted from the motor to the pump through some positive form of drive such as gearing or chain drive. The latter is most suitable and is much the more popular in the United States. Suitable ratio chain gears are on the market and cost about £7. They are moderately silent; have long life, and eliminate troubles such as slipping and stretching, which are common to belt drive.

The Pump.

The type of pump which is most commonly used in the United States is a four cylinder single-action vertical type with cylinders about 2½in. x 2½in. The crank shaft speed is about 70 r.p.m., and integral reduction gear of 6 to 1 ratio enables the main driving shaft to run at 420 r.p.m. From this shaft to the motor, chain drive of a suitable ratio is provided. The delivery at 300 lbs. pressure is a little over 12 gallons per min., and the pressure may be increased within the limits of the power of the motor available. Such a pump, together with air chamber, pressure gauge and strainer would cost landed in Australia about £75 or £80.

Relief Valve.

A reliable relief valve is necessary for the efficient protection of the system. In some makes of pumps such a valve is "built in," but in dealing with such high pressures a subsidiary valve is often advisable.

Straniers.

In general a strainer so constructed that the solution is strained up through the screen rather than down is the most satisfactory. Grit and impurities will then tend to fall away from the screen and thus avoid choking.

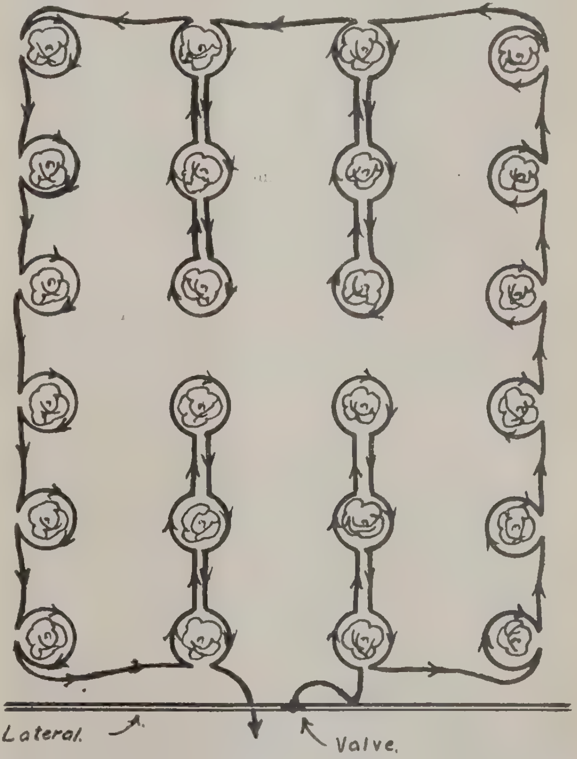

Fig. 1.—This diagram shows the path the man takes with the spray gun. The operation is repeated on the opposite side of the lateral. (For description, see next page.)

Vats.

Wooden vats have, in the past, been generally used, but concrete is now found to be more durable and no more costly. The size, of course, depends on the area to be sprayed and the size of the trees, but in general it is preferable to have such a capacity that at least half a day's spraying can be undertaken without refilling. About

400 gals. is therefore the minimum size and a tank holding about 3 ft. depth of solution would need to be about 5ft. 3in. internal diameter to hold that quantity. If the tank is sunk to about two-thirds of its depth in the ground the filling with spray solutions is facilitated. A barrel of lime sulphur, for instance, can be fed in by gravity.

A reinforced concrete tank of the type described would be constructed by an outside contractor for about £15, but many growers are quite capable of such work themselves and could construct one for very much less.

Should it be desired to put two spray guns into operation and only refill on commencing work in the morning and again after the midday interval, a tank of double the above size or even 1,000 gals. would be preferable. The cost would perhaps be half again as much as for the 400 gals. size.

Agitators.

The provision of an effective agitator is of great importance. Uniformity of strength of spraying solution can only be attained by the prevention of precipitation, and constant stirring is necessary. Most growers have experienced difficulty with the type of agitator which requires bearings and stuffing boxes in the side of the vat below the water line. This type of agitator should be avoided. The best type is one in which a shaft is placed vertically in the centre of the vat resting in a foot bearing at its lower end, and driven at the top by spur wheels connecting it with a horizontal shaft which is in turn driven from the pump. At the bottom of the vertical shaft either two or four long radial paddles of 1¼in. x 1¼in. hardwood are fixed, and these are made to rotate within an inch of the bottom at about seven revolutions a minute. Centrifugal forces set up in the solution will then cause a current to flow from the middle of the bottom up the sides towards the middle at the top and down the centre, completing and continuing a definite current motion and giving perfect mixing.

As the pump shaft is the slowest running, it is most suitable for agitator drive. A 10 to 1 ratio chain gear will give the exact speed necessary.

Housing the Plant.

While it is essential to provide proper protection for the working parts, it is not necessary to have a very substantial building. Just how far one cares to go in the construction of a building after providing the essential features depends largely on personal preference.

The Pipe System.

The class and size of pipe used and the method of reticulating the orchard varies considerably in the different fruitgrowing areas of the United States. Unnecessary expense was entailed in the first experiments by the use of galvanised pipe. It is now found that black wrought iron piping is more economical in that most of the corrosion occurs on the inside of the pipe. In one large orchard in Virginia secondhand piping was installed in 1921, and is still in use and satisfactory. This, of course, opens up an avenue for the reduction of installation costs.

The most popular sizes used are 1, 1¼, and 1½ inch piping for the main lines and ½ and ¾ inch for the laterals. If one operator only is to be employed on the spray gun, or if two guns are to be used from the same stand-pipe, there is little advantage in having a main line much larger than the lateral. Taking everything into consideration—cost of piping, mechanical strength, carrying capacity and friction losses—it may be said that 1in. piping for the main line and ¾in. for the laterals will be the most satisfactory for average conditions.

Due to the grades and the irregularity of layout of orchards, the location of pipe lines is largely an individual problem. In general, a main line is run from the plant either through the middle of an orchard or across one side, whichever is more convenient. Laterals are run off the main line every eight to fourteen rows, depending on the distance of the trees apart and the length of hose it is proposed to use.

Assuming an orchard of 25 acres and roughly 10 x 25 chains on the sides with trees planted 22ft. apart, there would be about 29 rows one way by 74 the other. Now if a main line were laid through the middle of the orchard in the shorter direction, approximately 550ft. of 1in. pipe would be required. Laterals could be taken off, starting from the plant at the fifth, fifteenth and twenty-fifth rows, each lateral being about 770ft. long with an aggregate length of 4,620ft. Stand-pipes would be provided on each lateral opposite alternate rows, and the group of trees sprayed from each stand-pipe would then be as shown in figure 1.

Each of the laterals should be controlled by a 1in. globe valve, and each standpipe fitted with a reducing socket and a ½in. globe valve. The latter can be bought screwed on the delivery side for a ½in. hose union, which economises the cost of incidental fittings.

High pressure hose of ½in. internal diam. and of the best quality obtainable will be found the most economical. For the group of trees shown in figure 1, about 120ft. will be ample and not unwieldy in operation. It is necessary, however, to adopt a definite route of travel from tree to tree, and that shown in the illustration is a typical method. A boy to feed up the slack of the hose to the operator is generally employed. The operator's attention should be concentrated on spraying, and it is the fact that the flow of solution can be almost continuous with a stationary plant that accounts for the greatly increased efficiency of that system.

From the diagram it will be seen that even without the help of a boy the operator does not have to drag more than four tree lengths of hose at any one time. The general practice is to have the man with the gun get right under the tree next to the trunk and spray around on the inside, working gradually to the top. Then from the outside he covers the tree completely, or for half its circumference, according to its position on the plan of route. It is possible, of course, to circle each tree at the one operation, but the comparative convenience of each method can only be decided by personal experience.

Methods of Laying Piping.

In some parts of the United States pipe lines are merely laid on the ground. This hinders cultivation to some extent, and broken pipes are apt to result occasionally, but such a method is sometimes preferred since it is cheaper, repairs can be made quickly, and the lines may be laid down and taken up readily. There are advantages, however, in burying the piping, and more growers are favoring that method, particularly since it has been found possible to plough furrows sufficiently deep to carry the piping below the depth of ordinary ploughing and cultivation.

There should be plenty of unions in the pipe line to facilitate repairs and taking up or putting down the lines. A union inserted about every 150ft. of pipe run is recommended.

At the lowest point in the system a draining cock should be fitted, and at the completion of spraying the whole of the solution in the pipes should be run out. Some growers fill the system with clean water, but this should not be done in systems laid on the surface if frosts are expected.

Conclusion.

Growers interested in the development of the electrically driven spray plant are invited to write to the State Electricity Commission, Melbourne, for any information on this subject. Expert advice on the details of the engineering aspect of the problem will be gladly given.

Western Australian Fruit Season.

An Interesting Review.

(By Geo. W. Wickens, Superintendent of Horticulture.)

Stone Fruits.

SUMMER HAS WANED, and autumn tints are showing on trees and vines of varieties maturing their fruit in the earlier part of the season.

The talk of the glut of stone fruit will have subsided and thoughts of it live mainly in the minds of those whose income was much below expectations owing to a large portion of the crop being either unsaleable or saleable only at prices that barely covered the cost of cases and the seller's commission.

If it were Nature's plan to produce excessive crops in successive seasons, her lessons would be more readily learned, and not easily forgotten, but with very light crops usually following very heavy crops, the experience of the too-bountiful season is forgotten in the lean season, and so the mistake of allowing trees to again over-produce is perpetuated.

Unless something in the nature of a miracle occurs, the stone fruit crop in season 1930-31, will be a very meagre one indeed. Not only did the trees suffer from over-cropping in the present season, but continued dry weather in summer, following a winter with a rainfall below the average, has also had its effect in limiting growth and preventing fruit buds from developing. In addition, the limbs of many old trees have broken down badly under the weight of fruit, and these combined circumstances make it certain that the major portion of next season's stone fruit crop must be looked for on younger trees, just reaching bearing age.

So it will happen that many growers will add to the losses sustained in the year when prices were low, the lack of receipts in the following year, when prices are high, but fruit absent. To fail to derive income from an orchard, both in the heavy and light years, is a disastrous state of affairs, and can be guarded against by

preventing trees from over-cropping.

This is done by keeping the trees in good heart with manure and cultivation, reducing the fruiting wood by judicious pruning, and heavily thinning the young fruits; not only will this treatment prevent over-cropping in the abundant season, but will also materially assist in the production of fruit in the light season.

No Glut of Prime Fruit.

Before leaving this subject I would like to state there was no glut of really prime fruit this season; prime fruit did not bring at times the price it should, but there was always a sale for it, and the low price was due to the bearing down effect caused by the quantities of rubbish on offer at the same time. "Keep the rubbish off the market" is a good slogan, but "Avoid producing rubbish" is a better one. No grower can be certain that he can make his trees (particularly stone fruit trees) produce a crop in a given season, for after the utmost care, bad weather conditions or disease might nullify his efforts, but every intelligent orchardist can and should prevent his trees from over-cropping.

Apples.

Great is the change this season from the fruit shipping activities of last. During the twelve months ending June 30, 1929, 737,676 cases of fruit were shipped from Western Australia to overseas markets, and in the same period 166,032 cases were shipped to the Eastern States, making a total export for the year of 903,708 cases. This year, shipping space booked for overseas markets is under 170,000 cases, and it is most unlikely that any fruit will be sent to the Eastern States.

The great falling off in export is due to the light crop of Apples, which will probably amount to little more than one-third of last season's production, and what this means in the export trade is shown by the fact that of the 903,708 cases mentioned above as having been sent out of Western Australia, 821,014, or over 90 per cent. of the total, consisted of Apples.

Just as the stone fruit growers in season 1929-30 had an over-crop with a large proportion of it undersized, so may the Apple growers in season 1930-31 have a similar experience unless they take the necessary steps to prevent it, by pruning severely, manuring heavily, cultivating thoroughly, and thinning drastically.

Heavy Orange Crop.

The Orange crop this year, that is the crop which will commence ripening from the latter part of May onwards, promises to be well in advance of last year's yield. The average production for the last five years for which figures are available amounts to 206,674 cases per annum, and at time of writing—February—it looks as though this year's crop will exceed that by about 20 per cent., but the very dry weather now being experienced, and last winter's rainfall being under the average, rendered a crop estimate at the present time a dubious matter, for in some Orangeries which have no facilities for irrigation, a number of trees are drought stricken, and unless rain falls in the near future, will fail to mature their fruit. I have visited many citrus orchards within the last few weeks for the purpose of forming an estimate of the coming crop, and have noticed in several places where irrigation was being practised that the first watering had been too long delayed, the trees having been allowed to partially wilt before moisture was supplied to the soil, and the effect of this has been, what is common under such circumstances, an out-of-season blooming which, whether it produces fruit or not, is bad for the trees and unprofitable to the grower.

If my estimate of a 20 per cent. increase, which means a crop of about 250,000 cases, will be approximately correct or otherwise, and if my expectations are realised, it will be the heaviest yield, bar one, since the industry started in Western Australia. The exception referred to was in season 1923-24, when the record for the State was established with 264,160 cases; 1924 was also the peak year for area, which then amounted to 3,241 acres, a total that has since steadily declined until it now stands at 2,931 acres.

Trees in Unsuitable Soil.

I am satisfied this decline has not been brought about through a difficulty in obtaining a payable price for the product, because during the last five years good Oranges have sold well in Western Australia, despite the fact that the quantity exported decreased during that period. No! a tour through the Orange-growing districts will soon convince anyone that the lessening area is due to trees having been planted in unsuitable situations, and later taken out to make room for something more profitable under the existing conditions. Sometimes the soil has been the trouble, at others there has been too much water, and again too little, but whatever the cause, the rooting out is a warning to property holders in those localities not to tread in the same path, and so new plantations do not take the place of the demolished ones.

As a matter of fact, while there are thousands of acres in Western Australia which are eminently suitable for growing Apple, Pear, stone fruits trees and Grape vines, it is not easy to find a large area of land suitable for Orange growing. The difficulty arises because the land must not be situated in the colder parts of the south and south-west, where the rainfall is ample, because climatic conditions are there unsuitable, and further north, where climate and soil are right, lack of water is mostly the limiting factor.

For this reason, with a steadily increasing population there seems to be little fear of over-production, and where soil is suitable, the climate right, and sufficient rainfall or water for irrigation available, Orange planting is still a sound proposition.

I noticed last winter that a number of Orange growers had failed to apply Bordeaux mixture—4:4:50—or Burgundy—4:6:50—in time to prevent citrus brown rot from appearing and damaging the trees; the spraying should have been carried out before the end of April.—"W.A. Journal of Agriculture."

The Kurragullen District, W. Aust.,

APPLES AND PEARS are the principal fruits grown in the Karragullen district, writes **Mr. Hector J. Price**, Manager and Secretary of the Illawarra Orchard Ltd., Karragullen, W.A. The Granny Smith is the chief export variety, followed by the Rokewood, Cleo., Dunn's, and Jonathan, while the varieties grown for the local market are Dougherties, Yates and Tasma.

Illawarra Orchard comprises of five acres Bartlett Pears and 38 acres of Apples, which include all the abovementioned varieties, except the Rokewood. Owing to its susceptibility to water core, this variety, of which there were 13 acres, has been reworked over to Granny Smith, Yates and Tasma during the last four years. The strap method of grafting was used.

There are 13 acres of G. Smith, and this prolific bearer yielded over 4,000 cases last season, although several acres of grafts have only just commenced bearing. 4,850 cases of Dougherties were harvested off 846 trees. This variety, as well as the Yates, Tasma and Jonathan, color up very well. We find the Tasmas excellent keepers.

One grower in this district estimates that he will harvest 3,000 cases off about 10 acres of Rokewoods this season. Other varieties are light, particularly Dunn's and Jons., although we have a medium crop of Dougherties, Yates and Grannies.

We have our own cool store, with a 10,000 cases capacity. This is not a district co-operative store. The Bartlett Pears are stored for the local market. They yielded 3,150 cases this season (off 550 trees).

Manurial Programme.

As regards our manurial programme, we apply on an average 10 cwt. to the acre of combination manure just prior to commencement of ploughing in August. In addition, we apply 3 lbs. sulphate of ammonia per tree to a different section of the orchard every year. The ratio of the combination manure is about 6 nitrogen, 5 potash and 4 phosphate. A liberal dressing of lime is given every four or five years.

We do not see any advantage of planting a cover crop in this district in the autumn for ploughing under in the spring, as we get a fine crop of weeds—at least 2 to 3 feet high. There is also the danger of early heavy rains washing the soil away. Then again, early frosts retard the growth of the cover crop.

Pest Control.

Red mite (bryobia) is our chief pest. It is controlled by spraying with red oil 1—19 before pruning, and by an application of summer spraying oil.

We have been in the habit of applying a fungicide (lime sulphur) at late dormant stage, but last year we did not. One thorough application of Bordeaux 6—6—50 in the "pink" stage kept the Pears very clean from black spot. Woolly aphis, which was very troublesome until the introduction of the aphelinus mali, is now kept in check by this parasite.

This State is free from codlin moth, while black spot on Apples is unknown. Although a couple of sprayings for San Jose scale is made in some districts, it is not existent here.

Thinning is practised very heavily. Recently 10,000 were thinned off one old Dougherty tree. This particular tree yielded 31 bushels the same season.

Drainage and Irrigation.

Our orchard is thoroughly drained, mostly with 3in. and a few 6in. draining tiles. In many sections we have a drain in every land. These drains flow into an open drain in the centre of the orchard. This main drain is the original creek straightened out. As our rainfall is in the vicinity of 35—40 inches, most of which falls during the winter months (60in. in 1926), there is a good volume of water running down the main drain.

There is an irrigation scheme which irrigates about 10 acres of the highland. It comes from a spring, and gravitates.

Grading and Packing.

In connection with our packing equipment, we are installing a Cutler grader this season. As it is already on the water, we should escape the increase in tariff.

Stone-fruit Growers' Association Formed.

A STONE-FRUIT GROWERS' Association has been formed in Western Australia, with Mr. T. H. Ilbery, of Mundaring, as President, and Mr. W. Hart, of Roleystone, as Hon. Secretary.

In the formation of this Association, meetings were held at Roleystone and Mount Helena, followed by a representative and well-attended Conference at Kelmscott.

It is proposed to work with a Central Executive in Perth, having a number of branches in the fruitgrowing areas.

The "Fruit World" tenders good wishes to this Association, and trusts that good results will follow this organising effort.

H. A. Pittman, Plant Pathologist.

Mr. H. A. Pittman, B.Ag.Sc., is performing good service as Plant Pathologist to the West Australian Department of Agriculture. Mr. Pittman succeeded Mr. W. M. Carne, who was formerly Economic Botanist and Plant Pathologist, but who has since joined the Council for Scientific and Industrial Research.

Mr. Pittman was born in Sydney, and after a successful University career, he taught in the Agricultural High School, Yanco, N.S.W., subjects including: agricultural chemistry, botany, etc. He also saw service with the Council for Scientific and Industrial Research and the Waite Institute, Adelaide. Mr. Pittman is now conducting valuable researches in Western Australia.

Scientific Research in the Fruit Industry.

Important Work is being Conducted.

Review of the Operations of the Council for Scientific and Industrial Research.

Very important research work is being conducted by the Council for Scientific and Industrial Research. The field for investigation is very large, but it is satisfactory to note that the fruit industry is receiving much attention.

Summary.

In the annual report of the Council for Scientific and Industrial Research for the year ended June 30, 1929, which has just been tabled in the House of Representatives, mention is made of the increased interest which has been shown in the work of the Council.

Special mention is made of the magnificent gift of £20,000 by Mr F. D. McMaster, of "Dalkeith," N.S.W., for the erection of a laboratory for the study of diseases of animals, and of the Darling family's gift of £10,000 to the University of Adelaide for a laboratory to house the Council's Division of Soils.

The main work of the Council has been organised into divisions, of which there are now six, namely, animal nutrition, animal health, plant industry, entomology, soils and forest products. In addition to the work coming within the scope of these divisions, investigations are in progress on the storage and preservation of Oranges, on the maturation of Bananas, on production problems of dried Grapes and of citrus fruits, on poison plants, on problems relating to radio, on flying foxes, and on mineragraphic methods for the determination of the constitution of ores.

More Trained Scientists Needed.

A factor that has seriously militated against the more rapid progress of the Council's work has been the shortage of the necessary investigators—entomologists, plant pathologists, etc.—having the training and experience fitting them to attack the various problems in an efficient way. This shortage will be overcome in a few years, but in the meantime it certainly constitutes a hindrance. Nevertheless, important progress has been made in several directions.

Prickly Pear Investigation.—The great destruction caused to prickly pear in Queensland by the cactoblastis caterpillar is now fairly well known. The numbers of this caterpillar have now reached the billions, and the promise of complete success is most hopeful. The Council and its predecessors have for years been freely contributing towards the cost of the research work involved. The Council's contribution is now £9,000 p.a., and the States of Queensland and New South Wales also contributing £4,500 p.a. each. In addition, both these States have set up separate organisations in order that the results of the research work may be applied in a practical way.

The importance of

the entomological work

of the Council will be realised when it is remembered that, according to a recent authoritative estimate, the loss caused by insects in Australia amounts to no less than £20,000,000 per annum. In an attempt to reduce this loss the division is at present concentrating on the blowfly, buffalo-fly,

orchard pests such as codlin moth,

and white ants. Within the limitations of its finances, the division is making a world-wide search for other insects likely to prey on the species causing so much damage in Australia. This division is also investigating the possibilities of turning insects to good account in another direction, namely, in the control of noxious weeds. Work of this nature is at present being concentrated on St. John's Wort, ragwort and Noogoora burr, and it is hoped ultimately to discover and breed up supplies of insects that will be as destructive to those weeds as cactoblastis is to prickly pear.

In the field of plant problems, the Council is at present engaged on studies of plant diseases—bitter pit in Apples, water blister of Pineapples, blue mould and other diseases of tobacco, and spotted wilt of Tomatoes; plant breeding, plant introduction, and weeds. Work on plant introduction is only just commencing, but the possibilities are large, as evidenced by the valuable results that have followed the introduction into Australia by other authorities of subterranean clover and lucerne.

The work of the Division of Soils has consisted of a series of soil surveys of certain of the irrigation settlements in the Murray. The ultimate object is to study soil types and thus to avoid in the future the expensive mistakes and the writing off of so much capital that has taken place in these settlements in the past.

The most recently formed division of all—that dealing with Forest Products—is confining its attention mainly to problems of the seasoning, the preservation and the efficient utilisation of Australian timbers.

* * *

The foregoing is an abridged summary of the work of the Council. As regards the fruit industry, in more detail the following is set out:—

Plant Diseases.—A loss of £50,000 per annum is estimated as a result of bitter-pit in Apples and £7,500 per annum by water-blister of Pineapples, two diseases which are being investigated.

(i) **Bitter-pit in Apples.**—In the investigations on bitter-pit, which are under the direct control of Mr. W. M. Carne, Senior Plant Pathologist, assisted by Messrs. Pittman and Elliott, of the Plant Pathology Branch, W.A. Department of Agriculture, very important results have been obtained, and at least a definite indication as to the cause of bitter-pit and a practical means of avoiding it have been discovered. The results of the work done during 1928 were published in the Council's Bulletin No. 41, "Bitter-pit of Apples." The investigations were continued during 1929. The results show that bitter-pit is due to Apples being picked before they have reached a certain stage of maturity, that a simple iodine test for starch is a guide to maturity, and that

bitter-pit may thus be avoided

by picking Apples after they have arrived at a stage of maturity at which they are no longer susceptible. While there are certain details connected with varietal and seasonal differences yet to be investigated, the general principle holds good for all Apples, that later picking is essential for the elimination of bitter-pit and that a shorter picking season is necessary to avoid over-maturity. An immediate and much needed improvement can be effected in exported Apples by picking them on a basis of maturity. This complete change in picking methods cannot probably be brought about suddenly, but it is obvious that a reduction in the amount of immaturity, bitter-pit, and breakdown, may be obtained next season by those controlling the industry.

(ii) **Spotted Wilt of Tomatoes.**—These investigations are being carried out at the Waite Agricultural Research Institute under the immediate control of the Institute's Plant Pathologist, Mr. G. Samuel, M.Sc., assisted by an officer of the Council, Mr. J. G. Bald, B.Agr.Sc. It has been ascertained that spotted wilt is a virus disease and that it is normally spread, at least in South Australia, by a species of thrips, **Frankliniella insularis.** The information already obtained is of much value in planning further experiments on control. Since the thrips, **Frankliniella insularis,** is a widespread inhabitant of both cultivated and wild flowers, the control of spotted wilt on outdoor Tomatoes may prove to be particularly difficult unless a resistant variety can be bred. On the other hand, it should be practicable to develop methods of control for commercial glasshouses. The results of the investigations to date are being published as one of the Council's Bulletins.

Cold Storage Problems.

General Organisation.—Largely by reason of the lack of the necessary personnel, it had not yet been possible to give effect to many of the recommendations made in the report of Dr. F. Kidd and Dr. W. J. Young, nor to proceed very far with the organisation of any Division of Cold Storage Research that might be proposed. That position still remains, and work in the field of cold storage has been limited to the isolated investigations on citrus fruits, Bananas, and meat reported on last year.

Co-operation with British Food Investigation Board—Proposed Expedition.—The Council has continued to keep in close touch with the authorities of the British Food Investigation Board, especially as some of the work done in Australia and in England deals with identically the same material. The Board is desirous of having further investigations made of all the factors concerned in the successful carriage of meat and fruit to England. For that reason it proposes to carry out surveys of all such factors (environmental conditions of production, temperatures of storage, ventilation in storage, conditions of the voyage, treatment after landing, etc.), right from the points of production in the various Dominions to the retail markets in Great Britain. Some work of this nature was carried out in Australia some years ago in connection with the export of Apples.

Problems in Preservation of Citrus Fruit.—Actual investigational work under the co-operative arrangements outlined in the previous annual report was commenced in August, 1928, when the effects of preliminary washing with various solutions on the storage life of Navel Oranges were studied. The solutions used contained either bicarbonate of soda or borax. The effect of treating the skins of such washed Oranges with small amounts of paraffin was also studied. A similar experiment was commenced some months later with Valencia Oranges. In both series, investigations were made into the nature of the moulds to which the fruit was exposed from the orchard to cool store, and into the moulds which caused the wastage.

It has been decided to carry out another series of **experiments on Navel Oranges** during the forthcoming season. The programme to be followed has been prepared in the light of the information obtained in the first two series of tests. In this third series the effects of degree of maturity of the fruit (as determined by acidity-sugar ratios) and of various temperatures of storage will be investigated.

Banana Investigations.—Mr. G. Williams, Director of Fruit Culture, Queensland Department of Agriculture and Stock,, has been added to the committee controlling this work. The small experimental ripening chambers at the Universities of Melbourne and Queensland have proved quite satisfactory and have been in operation fairly continuously. They have been so constructed that the temperature and humidity of the fruit they contain can be altered at will.

In Queensland, the object of the preliminary experiment was to establish a definite ripening procedure for the Cavendish Banana. To this end the American ripening procedure for the Gros Michel was tried out, but it soon became evident that while for the Cavendish the procedure, or slight modifications of it, gave excellent results, the average time taken was excessive for commercial purposes. Investigations are now being commenced with a view to hastening this time of ripening. Indications have already been obtained that the time can be cut down considerably by the use of suitable atmospheres. In Melbourne, Bananas of different origin have shown very great differences in rate and evenness of ripening. Experiments are now in progress on the rate of respiration and changes in the sugar content of Bananas during ripening.

Another important side of the investigations on Bananas is that of the conditions of transport between Queensland and the southern markets. The State Railway Departments of Queensland, New South Wales and Victoria have agreed to co-operate in the investigation of this phase. The scope of this inquiry is (i) to investigate the conditions under which the fruit is being conveyed at the present time, and (ii) to conduct experiments with a view to improving these conditions. The Railway Departments have also agreed to fit a heating apparatus, known as Stone's apparatus, which is used extensively in Europe for heating Banana vans, to an insulated waggon in each of the three systems. Initial experiments with these waggons have already been conducted.

It is hoped as a result of the investigations outlined above to develop a technique both of ripening and of transport whereby Queensland fruit may be landed on southern markets in a much more satisfactory condition than at present.

Flying Fox Problem.—In the last annual report of the Council, it was stated that in view of the serious menace confronting fruitgrowers in New South Wales and Queensland through the depredations of flying foxes and of the failure of such suggested methods of control as poisoning, shooting, etc., it had been decided to approach the problem from a fundamental basis and to collect full information regarding the life-history and habits of the animal. The Council and the New South Wales and Queensland Departments of Agriculture acocrdingly agreed to contribute £500 each towards the cost of an investigation over a period of two years. Applications were invited for the position of investigator, and Mr. F. N. Ratcliffe was appointed to the post in March, 1929. He is carrying out a systematic biological study of the various species of flying fox and is collecting quantitative evidence of the losses caused in various districts to the fruit industries in New South Wales and Queensland, and of the distribution of the different species of flying foxes. A preliminary survey has been completed in Queensland and will be extended into New South Wales when the animals begin their southerly migration. There are four species in Australia, the commonest being **Pteropus poliocephalus.** The investigations will be concentrated mainly on that species as it is responsible for by far the greater part of the loss suffered by fruitgrowers. A progress report on the work has been received from Mr. Ratcliffe and will be published in the Council's Journal.

The report makes it clear that the Council is concentrating on many problems of great importance to the primary industries of Australia. The Council constitutes a powerful weapon with which to place the operation of those industries on a better scientific basis, and in so doing to make very substantial increases in the national income.

The Victorian Fruit Marketing Association.

Important Matters are being Dealt with.

THE monthly meeting of the Executive Committee of the Victorian Fruit Marketing Association was held at Temple Court, Melbourne, on Friday, April 11, 1930.

There were present Messrs. J. B. Mills (Chairman), W. H. Carne, W. A. Webb, E. I. Lawford, K. Eagle, H. Ford, A. S. M. Harrison, F. R. Mellor, and R. E. Boardman (Secretary). Apologies were received from Messrs. Fowler, Griffeth, Parnham, and Barker.

Resignation of Mr. Bailey.—Mr. J. W. Bailey wrote, tendering his resignation as a member of the Council, on account of the pressure of other duties; it was decided to request Mr. Bailey to reconsider his resignation, expressing appreciation of his services, and trusting he would be able to find time to continue as a member of the Council.

Imperial Fruit Show, England.—Details of the Imperial Fruit Show were forwarded by Mr. J. M. Ward. As it was too late to arrange entries for the 1930 show, it was decided to note details to compete the following year if possible.

Number of Cases to the Ton.—A letter, written by Mr. Geo. Summers, Coromandel Valley, S.A., to the "Fruit World" was read, stating that 42 hardwood cases were reckoned per ton, according to South Australian railway regulations, but with softwood cases it worked out at 48 cases to the ton.

On the motion of Messrs. Carne and Eagle, it was decided that the Railway Commissioners be written to, drawing attention to the fact that we are being charged at the hardwood rate for all cases forwarded from Victoria. Some years previously there was a considerable difference in the rate charged between the hardwood and softwood cases, but as the use of the hardwood case became general the freight had been charged at the full hardwood rate for all shipments. The position now, however, is that about 60 per cent. of the export fruit from Victoria is going away in Canadian cases, which are considerably lighter than the previous softwood cases on which a concession had been obtained. As Victoria exported in competition with the other States (South Australia in particular giving growers the benefit of the weight of the case in haulage), it was desired to secure the lower freight rates, and that the amended charges be made retrospective. The Railway Department to be reminded that this matter was brought before their notice before the commencement of the season by Mr. Colombie, President of the V.F.M.A., and an investigation was promised, but so far no results had been advised.

Duty on Softwood Shooks.—A letter was received from the Minister for Customs refusing the Association's request for softwood shooks to come under item 404, 10 per cent. (refundable) duty "in the interests of the local timber industry."

It was pointed out that the duty of 4½d. to 5d. per case was a very heavy charge, the money having to be paid out before the cases could be used, and numerous difficulties were in the way of securing rebates.

Mr. Eagle stated that it had been found impossible to secure sufficient seasoned shooks for fruit cases. The country had been scoured to find a sawmill which would undertake to supply the necessary quantity of seasoned shooks.

It was decided to confer with Mr. C. H. Tutton in regard to any further action to be taken.

Fruit for Rotterdam.—Letter received from the International Fruit Co., Rotterdam, asking for offers for direct shipment of Apples to Rotterdam. Decided to send copies of the letter to fruit shippers.

Organising Harcourt Growers.—Mr. H. Ford wrote stating he believed it would be possible to secure a large increase of membership in Harcourt, and that a meeting should be called there soon. The Chairman said that plans were being made to hold meetings in various centres to organise growers.

Fruit Wrapping Paper.—Letter received from C. H. Tutton Pty. Ltd., stating that with regard to Apple wrapping paper printed overseas, the Customs Department advised that it was essential on all future importations for the word "Australia" to be plainly shown on the printed wrappers. Letter received.

Finance.—The Secretary reported being in touch with shipper members and the Fruit Exporters Handling Committee regarding details of fruit shipped by members. Decided that the Chairman be requested to finalise the matter with the Handling Committee to enable levies to be collected.

Australian Conference of Fruitgrowers.—The Southern Fruitgrowers' Association wrote, sating that they would not be appointing a delegate to the Australian Conference of Fruitgrowers. Decided, on the motion of Messrs. Lawford and Webb, that the V.F.M.A. send two delegates, and that Mr. J. B. Mills and Mr. C. M. Griffeth be appointed.

The agenda paper for the Conference was then dealt with in detail, as follows:—

> **Compulsory Reduction of Varieties for Export.**—The Chairman stated that the compulsory elimination of varieties should be outside the scope of legislation. It was a matter of finance. The Alfriston variety, once thought little of, was now vieing with Jonathan in prices. If certain varieties were unprofitable commercially, the trade would soon cease financing their export.
>
> Mr. Harrison said that the elimination of many varieties would be to the benefit of all. Growers would do better by exporting fewer varieties. New Zealand had proved this.
>
> Mr. Mellor said this was a matter for education, not legislation: he did not favor arbitrary interference in the matter of varieties for export.

Mr. Carne agreed that legislation in this matter was undesirable, but education was necessary. The position would right itself if growers planted only the better class export varieties.

Mr. Webb agreed that while legislation was undesirable, growers should be educated in the fact that the planting of fewer varieties would improve the industry all round.

Export Regulations.—Tasmania had raised a query as to the benefits of the present export regulations.

Mr. Carne said the regulations had brought about confidence between buyers and sellers.

The Chairman said a substantial C.I.F. business had been made possible on the basis of the present "standard" grade. While the enforcing of regulations often brought temporary hardship, the general effect over the years was all to the good.

It was reported that N.S.W. desired to alter the "standard" grade by deleting the provision for "10 per cent. blemish" and inserting "100 per cent. blemished," but such blemishes to be very slight and the grade to be a good commercial one.

It was decided, on the motion of Messrs. Ford and Webb, to oppose any alteration to the "standard" grade.

Regarding the item from the Tamar Association—"Charges in general in connection with the shipping of fruit," it was stated that Tasmanian growers had to pay an impost of 2d. or 3d. a case to the holders of the shipping space, this being an export charge not borne by growers in the other States. It was decided to note the discussion on this subject and to support any proposals for securing a reduction of freight.

British Preference.—It was decided to support the proposal from Tasmania requesting a preferential tariff of 5/- per cwt. on Empire Apples.

German Tariff.—It was also decided to support the request that Australia be brought into line with New Zealand and Canada with regard to the duty on fruit entering Germany. Australian fruit paid 3/- per case duty. New Zealand and Canadian fruit paid only 1/9 per case.

Separate Holds for Each State.—This proposal was favored: it was stated, however, that owing to the activity of the Fruit Exporters' Handling Committee, 95 per cent. of Victorian fruit went into completely filled holds.

Trade with the East.—Decided to support the request from Tasmania and the Australian Citrus Growers' Convention for the appointment of Trade Commissioners in China and Eastern countries.

Australian Fruit Marketing Federation.—Mr. Harrison strongly supported the idea of the formation of an Australian Apple and Pear Export Association. This could be formed by a Federation of Export Associations in the several States.

It was decided to press for such an Association. At the same time, it was recognised that it would be desirable to have a general Conference of Australian fruitgrowers every one or two years.

Experimental Orchards and Research Work.—The Secretary reported that the Australian Conference provided an excellent opportunity to obtain an Australian wide review of the work being conducted in the State Experimental Stations and also to obtain a report as to the research work in hand.

Mr. Webb said this was a most important matter. While good work was being done, there yet remained very much to do, particularly with regard to codlin moth, black spot, and bitter pit. It was decided to support any request for increased research work.

Plant Quarantine Station.—The Secretary stated earnest efforts had been made for several years to induce the Federal and State Governments to establish plant quarantine stations, through which new and important varieties could be imported in quarantine for distribution when found clean. It was decided to support this proposal.

Fruitgrowers and the Arbitration Court. — Mr. Webb urged that rural industries should be exempted from awards of the Arbitration Court, and delegates were instructed to vote accordingly.

* * *

Fruit and Flower Show.—The Secretary reported that after conferring with the Chairman, it was decided to fulfil the suggestion made at the previous Council meeting, viz., to donate a prize of £5/5/- for the best case of Apples to be sent to His Majesty the King. Action endorsed; and it was decided to have a stand at the show to enrol new members.

New Apple "Hopton."—The Secretary reported having received advice from Mr. E. E. Pescott, Government Pomologist, speaking favorably of the new Apple, Hopton. This variety had been in existence for several years, but had not been brought into commercial prominence. The Apple was described as an extremely rich red, crisp, juicy, and of a good flavor; suitable for following on Gravenstein before Jonathans were ready. Its suitability for export could only be determined by experiment. It was decided to obtain more particulars and to obtain an exhibit at the Fruit and Flower Show if possible.

Scientific Research.—The Secretary reported having received the annual report of the Council for Scientific Research, in which details were included of the fine work being done for many primary industries, including the fruit industry. Of the six divisions of the Council, three dealt with plant industry, entomology, and soils. Important work was being conducted with Apples, Bananas, and citrus. There was a shortage of trained investigators in entomology and plant pathology, which had hindered investigational work. Mr. W. M. Carne, Senior Plant Pathologist, had presented a report on bitter pit; spotted wilt of Tomatoes was being investigated, also the parasite for the codlin moth. With regard to cold storage and the export of fruit, the Council was co-operating with British scientists.

It was decided, on the motion of Messrs. Webb and Carne, to obtain as many copies of the report as possible for circulation to members: further to request the Council for Scientific and Industrial Research to include representatives of the V.F.M.A. in committees on which members could supply specific or technical information.

London Horticultural Congress.—The Secretary reported that an important International Horticultural Congress was being held in London in August. Many of the subjects listed were of very great importance to Australia.

It was decided to request Mr. E. E. Meeking, who was on his way to England, to attend if possible on behalf of the V.F.M.A. to observe the proceedings and to present a report on his return.

Monthly Fruit Industry Luncheons.—The Secretary suggested that on the day of the monthly meeting of the Council of the V.F.M.A. delegates meet at a specified place for lunch: that a syllabus of speakers be drawn up, the opportunity to be open to all interested in every branch of the fruit industry to attend; each person attending, of course, to pay for his meal. There would thus be no expense attaching to this proposal: at the same time, it would provide a good means for the bringing together all interested in the industry, to exchange ideas and to have public attention directed constructively to the useful place which the fruit industry holds in the community. It was decided to give consideration to this proposal at the next meeting.

Reports from S. Australia.—The Secretary tabled reports of the doings of the South Australian Fruit Marketing Association. These were noted with interest, as it was decided to send reports of our meetings to the South Australian Association.

Pear Export.—Mr. Lawford moved "that this Association write to the Overseas Shipping Representatives' Association, asking them to do their utmost to provide further space for the export of Pears between now and the end of May, and that we require space for 40,000 cases of Pears which our members are prepared to ship. Seconded Mr. Mellor, and carried.

Next Meeting.—Decided that the next meeting be held on Friday, May 16.

VICTORIA.

Croydon Show.

Some excellent fruit and first-class flowers were on view at the Croydon and District Horticultural Show on March 29.

Though the fruit exhibits were smaller than was anticipated, the quality was excellent. Mr. A. C. Chandler won the principal prizes for Jonathan Apples. In the Pear classes, Mr. E. F. Wieland and Mr. A. J. Upton secured many prizes, while in the classes for Apples, Messrs. H. Tomkins & Sons were most successful, winning the champion prize for the best collection of six varieties of Apples and three of Pears, and that for four dishes of Apples suitable for export.

In the packing competitions for school children who attended the classes conducted by the Department of Agriculture, the prize was won by the Bunyip school, which thus secured the Gerrard Challenge Shield. Croydon district came second.

RED CLIFFS CO-OPERATIVE PACKING COMPANY.

At the recent annual meeting of the Red Cliffs Co-operative Packing Co. Ltd., the election of three directors resulted in the re-election of the three retiring directors—Mr. F. W. P. Hammet, Mr. R. A. Bate, Mr. A. MacKinnon. The general manager is Mr. H. R. Sloan.

FRUIT AND HEALTH.

Valuable Lectures by Dr. Philpots.

Dr. Geo. E. Payne Philpots has just completed a 4,000 mile tour of Victoria, visiting 50 towns and reaching over 50,000 people.

Dr. Philpots is an expert dietition, and his advocacy of the fruit-eating habit has meant the winning of health for many people. This certainly has been of material benefit to the fruit industry.

VICTORIAN FRUIT AND FLOWER SHOW.

Success attended the Fruit and Flower Show conducted by the Royal Horticultural Society and the Fruitgrowers' Cool Stores Association at the Melbourne Town Hall on April 29 and 30. There was much valuable propaganda to increase the consumption of fruit. Further details next issue.

Dried Fruit Situation.

Export Quotas.

NOW that there is produced in Australia far more dried vine fruits than can be consumed in the Commonwealth, efforts have been made to decide on an equitable basis for local and overseas trading, hence the Control Board and quota system.

The quota for 1930 export has been fixed as follows:—Sultanas, 90 per cent.; Currants, 90 per cent.; Lexias, 85 per cent.

The N.S.W. Dried Fruits Board, however, desired the N.S.W. export quota for Sultanas and Currants to be only 55 per cent., leaving 45 per cent. to be sold in the sheltered Australian market—with which the A.D.F.A. Board of Management entirely disagreed.

Several conferences were held in order to see if the N.S.W. Board would come into line, but as the result was negative, the A.D.F.A. declared lower prices for Sultanas to be sold in New South Wales.

It is expected that despite the clashing views, a compromise will be arrived at which will be mutually acceptable.

A report to hand from the N.S.W. Dried Fruits Board, dated April 23, is as follows:—

In connection with the price war in Sultanas inaugurated by the Australian Dried Fruits Association in New South Wales, the New South Wales Dried Fruits Board, at a special meeting held on April 22, 1930, considered the arrangement arrived at between the Irrigation Co-operative Societies Limited of the Murrumbidgee irrigation areas and the Australian Dried Fruits Association, following upon the Conference held at Griffith on Saturday, April 12, 1930.

The arrangement was made subject to the Board being induced to retain the existing export quotas of 55 per cent. for Sultanas and Currants, and allowing export by proxy from Victoria and South Australia.

The Board decided to retain for the present the existing export quotas and to agree to the proxy export desired.

The Board, however, has the right under section 11 of the Dried Fruits Act, 1927-1929, to recommend export quotas from time to time during a season, and in view of the obscure future position in New South Wales was not prepared to surrender this right.

FRESH FRUIT EXPORT.

Details of the fruit exported from Victoria up to and including April 12, are to hand from the Department of Agriculture as follows:—

Boat.	Apples. Cases.	Pears. Pkgs.	Plums. Pkgs.	Total Pkgs.
"Narkunda" (Apl. 8)	19,390	1,180	—	20,570
"Balranald" (Apl. 9)	16,278	8,990	—	25,268
"Yngaren" (Apl. 10)	10	—	—	10
"Touraine" (Apl. 12)	6	—	—	6
"Berwickshire" (April 12)	32,936	—	—	32,936
"Port Hunter" (April 12)	53,952	—	—	53,952
	122,572	10,170	—	132,742
1/1/30 to 5/4/30	521,244	72,763	911	594,918
Week ended 12/4/30	122,572	10,170	—	132,742
	643,816	82,933	911	727,660
Destination:				
London	226,112	82,933	911	309,096
Hull	57,868	—	—	57,868
Liverpool	59,274	—	—	59,274
Glasgow	22,822	—	—	22,822
Manchester	32,936	—	—	32,936
Hamburg	168,086	—	—	168,086
Rotterdam	70,154	—	—	70,154
Copenhagen	6,330	—	—	6,330
Gothenburg	100	—	—	100
Dunkirk	110	—	—	110
Marseilles	24	—	—	24
	643,816	82,933	911	727,660

The estimated export of Apples and Pears to this date was 690,000 cases.

CHILEAN NITRATE OF SODA.

Advice is to hand from Mr. A. E. Stephen, delegate for Australia and New Zealand for the Chilean Nitrate Producers' Association, that the Nitrate Committee Delegation has been re-established in Australia and New Zealand.

The Re-established Delegation will again pursue its research operations on crop culture and production throughout Australia, New Zealand, Fiji, New Guinea and other Pacific Islands, and invites the co-operation of all interested. A comprehensive set of publications is now being prepared, and will be issued free of charge to all who apply for them.

Mr. A. E. Stephen is a trained analytical and agricultural chemist, and has personally visited a great many of the agricultural centres of all the States of the Commonwealth, also New Zealand, Fiji, and the Parific Islands.

The Assistant Manager of the Delegation (Mr. G. McI. Donald, B.Ag. Sc.), is a specialist in crop cultivation methods, and in the use of fertilisers.

Research work has justified much attention being paid to the varied uses on the farm and in the home of iodine. Chilean nitrate of soda is the source of most of the iodine of commerce, and the small quantity contained in this natural fertiliser is often of considerable and special value.

VISITOR FROM CHILE.

Studying Australian Fruitgrowing Conditions.

TO OBSERVE FIRST HAND conditions of fruitgrowing in Australia, Mr. Hijinio Gonzalez, representing the Chilean Government, is now in Australia. Mr. Gonzalez is particularly interested in Apple production, cool storage, and export. Chile now produces more Apples than can be consumed locally, and an export market is desired. Last season 25,000 cases were sent to Germany.

The varieties grown in Chile include Jonathan, Reinette, Ben Davis, Cox Orange, Hoover, and others, including one known there as Huidobro.

Mr. Gonzalez is inspecting various fruitgrowing centres in Victoria, Tasmania, and the other States. He will go to Mildura and the Murray irrigation areas, including Renmark and Berri, in S. Australia.

ANSWER TO CORRESPONDENT.

Apples in Cold Storage.—"Cold Storage," Prahran, writes:—"French Crabs and Sturmers were placed into cold storage in May last. On examining in November the skin appeared good, but ¼ inch inside from skin went brown and soft for about ¼ inch. From then on to the core of the Apple the flesh was sound."

Answer (by G. B. Tindale, Department of Agriculture). —"Apples have only a limited life in cool store, and that after prolonged storage (these I note were stored till November), it frequently happens that they collapse, as described by your correspondent."

IMPERIAL ENTOMOLOGICAL CONFERENCE.

At London in June.

THROUGH the Governor (Lord Somers) the Department of Agriculture has been advised by the Secretary of Dominion Affairs (Lord Passfield) that the third Imperial Entomological Conference will be opened at London on June 17. In addition to the opening and closing days of the conference, which will be devoted to general business, it is proposed to set aside four days for the discussion of scientific papers. Conference will in all probability continue until June 27.

The Director of the Bureau has received from overseas Governments a considerable number of suggestions as to subjects for discussion. The special sub-committee of the Managing Committee of the Bureau which is supervising the preparations for the conference has recommended that the papers to be read should be confined to broad questions of general application, and the subjects which have been selected are as follow:—Locusts, biological control of insects, control of weeds by insects, fumigation methods, entomological work among backward races, tsete-fly control, pests of forest trees, pests of cereal crops, control of insects by cultural methods.

IMPERIAL AGRICULTURAL RESEARCH CONFERENCE, AUSTRALIA, 1932.

The next Imperial Agricultural Research Conference is due to be held in Australia in 1932. An organising committee consisting of the permanent heads of the six State Departments of Agriculture and the members of the Executive Committee of the Council, with power to add to their number, has been appointed. It is intended also to establish an organising sub-committee in England. It is anticipated that the meeting of the Conference in Australia will be an event of particular importance to agricultural research in the Commonwealth.

New South Wales News and Notes.

N.S.W. FRUIT SHIPMENT FOR HULL.

We were pleased to see Mr. H. Broadfoot, Fruit Packing Instructor, New South Wales Department of Agriculture, when passing through Melbourne. Mr. Broadfoot is aboad the s.s. "Port Hunter," with 30,000 cases of fruit—mainly Apples—for Hull.

Mr. Broadfoot speaks appreciatively of the assistance being rendered by the ship's officers and all concerned, towards obtaining a scientific report on the condition of the fruit during transit.

There are 18 thermometers in different places in each hold in order to check up the temperatures in the different parts of the hold. Instruments are also provided to test the humidity and the quantity of CO2.

All the packs in commerce in the export industry are being tried out, and a report will be submitted. The tests include the case 18 x 10½ x 11½, others in the long bushel, dump case, etc. Some cases are softwood, others hardwood. Others with hardwood ends and sides with pinewood top and bottom. Some fruit is wrapped, others unwrapped, using both sulphite wraps and oil paper. Grapes and other fruits are also in the consignment.

It is certain that some valuable conclusions will be drawn from this substantial commercial shipment from New South Wales. The Department, growers, and all concerned, are to be congratulated on the enterprise.

Mr. Broadfoot will visit the horticultural experiment station at East Malling and Long Ashton, also the various ports and places of interest, to assist in his investigations.

* * *

It would be a fitting climax if Mr. Broadfoot could return via Canada and the United States, where he could observe cultural conditions, by-product methods, and fruitgrowers' organisation in those progressive countries.

NOTES BY OUR CORRESPONDENT.

On April 3 last, the s.s. Port Hobart was loaded with the largest single consignment of Apples yet dispatched from Sydney. This shipment was suggested by Mr. B. C. Criswick, of the Port of Hull organisation here, and taken up with enthusiasm by growers who were asked to supply a quota. These were assisted by the State Department of Agriculture and by the Fruitgrowers' Federation, who lent very valuable support.

Mr. H. Broadfoot, special fruit instructor, has accompanied the fruit, and besides collecting valuable data en route, will be present when the cases are opened up and sold.

Although not comparing with the export ventures of other States, this shipment presages very extensive operations as large areas come into bearing.

Mr. H. V. Smith, manager of the Batlow Packing House, undertook the business part of the transaction, and has been specially thanked by the Department for his zeal throughout.

All of the fruit was carefully selected, comprising mostly Granny Smiths, and including Jonathans, King Davids, London Pippins, and others of suitable variety. Mr. Holmes, who supervised and inspected the loading, stated that never in all his wide experience had he seen a finer consignment. There were practically no rejections.

The actual quantities shipped are as follows:—Apples, 29,128 cases; Pears, 134 cases, 1,969 half-cases, 4,484 trays; Grapes, 50 half-cases.

The result of this shipment will be awaited with much interest, consisting, as it does of a well-considered venture, entailing scrupulous care in selection, picking, grading, packing and pre-cooling prior to loading.

The hold was sealed when filled, and will not be opened until Hull is reached. Mr. Broadfoot will be able to make notes of exceeding importance, seeing that he has already collected full data as to soils, growing conditions, and all other matters which may bear upon the condition of the fruit when opened.

Growers in N.S.W. should be supported by all others in their request that Mr. Broadfoot should return via the U.S., there to investigate the uses to which low grade Apples and Pears are put. A new industry hangs in the balance, and one in which all the growers in the Commonwealth are vitally interested.

FRUITGROWERS' FEDERATION OF NEW SOUTH WALES.

A MEETING of the Board of the N.S.W. Fruitgrowers' Federation was held at Sydney on April 16. There were present:—General J. Heane (in the chair), Messrs. H. G. Such (Griffith), F. Helson (Leeton), T. A. Tester (Young), A. E. Herring (Batlow), A. U. Tonking (Orange), L. C. Willis (Bathurst), W. E. Kirkness (Gosford), R. Hill (Narara), A. F. Dunstan (Sackvill Reach), J. Neil (Glenorie), A. J. Taylor (Singleton), W. W. Challis (Kentucky), P. C. Macdermott (Market Representative), and E. E. Herrod (Secretary).

Citrus Import Prohibition.—The Secretary reported lengthy interviews with the Federal Government, and the securing of the prohibition of Oranges and Lemons. It was decided to make further representations to secure the permanent adoption of the embargo.

Special Shipment to Hull.—The clearance of the "Port Hunter" on April 5, was reported. The shipment consisted of 25,518 bushels of Apples and 1,969 cases, 4,484 trays of Pears, and 50 boxes of Grapes, making a total of 32,021 packages.

By-products.—As the Department of Agriculture had not consented to send Mr. Broadfoot (in charge of the "Port Hunter" shipment), to America to study by-products and other matters, it was decided to press the request.

Agents' Agreement.—Further consideration was given to the terms of a proposed agreement between the Federation and the agents.

U.S.A. Markets.—Representations are to be made with a view to certain districts in the State being declared as areas free from fruit-fly infestation, with a view to fruit from such areas being allowed to export to the United States.

Duty on Imported Shooks.—Decided to proceed with the negotiations for a refund of the duty paid on cases which had been ordered under a contract prior to the duty being increased.

Marketing of Citrus in Canada.—Application was received from the Central Citrus Association for a recommendation that a guarantee be given against the Orchard Registration Fund in regard to a proposed experimental shipment of citrus to the east coast of Canada. The proposal outlined was to guarantee a shipment of 1,000 cases at about 12/6 per case up to a limit of a total of £600, this being the actual cost involved in picking, packing and transport.

After discussion it was decided that whilst appreciating the effort to develop this market it is considered that such expenditure does not come within the province of the fund.

It was decided, however, to make representation to the Federal Government with a view to the institution of some form of guarantee against loss on such shipments.

Interstate Conference.—Messrs. Heane and Herring, with Mr. Such as an alternate, were appointed to represent the Federation at the Interstate Conference to be held in Hobart on May 7, and it was decided to recommend the inclusion of the following matters for discussion. (1) Apple and Pear grading regulations; (2) Apple and Pear export regulations; (3) The need for guarding against the marketing of immature or dry citrus fruit; (4) Uniform weight of Grapes in cases packed with cork for export.

Second Crop Oranges.—The question of the large quantity of second crop Oranges still remaining to be marketed caused some serious discussion, and it was decided to approve of a proposal to institute publicity, with a view to assisting in the marketing of this crop.

NEW SOUTH WALES.

Crop Report.

Citrus Fruit.—Prospects generally have been maintained throughout the citrus-growing districts, and there are indications of an improvement in the metropolitan areas, states the N.S.W. Department of Agriculture.

Present conditions indicate fair crops of Navel and Valencia Oranges, good crops of commons, and poor yields of Lemons in all districts throughout the State, excluding the irrigation areas.

On the irrigation areas the prospects for all varieties of Oranges are good and for Lemons fair.

Statement Showing the Imports of Citrus Fruits Into New South Wales During the Period January 1 to December 31, 1927, 1928, and 1929.

	1927.	1928.	1929.
Country of Origin.	Number of Cases.		
U.S. America	17,284	5,090	7,714
Italy	450	2,188	2,770
Sicily	1,012	1,500	3,310
Islands	2	3	7
Norfolk Island	434	123	454
New Zealand	—	16*	30
Totals	19,182	8,920	14,285

*Returned consignments.

	Imports to Australia from U.S. America.	Exports to America from Australia.
1922-23	14 bushels	5,848 bushels
1923-24	16,592 ,,	Nil.
1924-25	7,418 ,,	Nil.
1925-26	8,286 ,,	Nil.
1926-27	22,248 ,,	Nil.
1927-28	12,632 ,,	Nil.

CANNED APRICOTS.

Pack for 1930 Exceeds that of 1929.

From information furnished to the Canned Fruit Control Board by canners in the various States, it has been ascertained that the total quantity of canned Apricots processed in Australia during the 1930 season is as follows:—

	dozens. 30 oz.	dozens. 21 oz.	dozens. 16 oz.	Equivalent 30oz. tins. in doz.
Export Pack—				
Choice	20,240	12,051	7,620	32,486
Standards	280,100	4,033	58,841	312,344
Seconds	2,617	—	—	2,617
New Zealand Pack—				
Standards.. ..	22,067	—	3,976	24,055
Seconds	15,040	—	—	15,040
Domestic Pack—				
Standards.. ..	145,709	—	24,055	157,736
Seconds	10,229	—	—	10,229
Totals	496,002	16,084	94,492	554,507

During last season (1929), the total pack of canned Apricots was equivalent to 474,960 dozen 30oz. tins.

DEVELOPMENTS IN GRAPE DRINKS.

Activity in California.

THERE have been interesting developments in America in the manufacture of pure Grape drinks. It is expected that about 1½ million gallons of Grape juice will be produced at a large factory which has recently been established at Lodi, California, also that a new Grape drink will be placed on the market .

There are many ways in which Grape juice may be displayed. Besides the bottled Grape juice, it may be converted into soda water, or dispensed in a frozen condition, or canned, or converted into syrup and concentrates.

There are a number of concentrated Grape juices being produced, some of which are made from red Grape juice, others from Muscat, and other white juices. Pleasing beverages can be obtained by diluting the better grades of concentrates with carbonated water.

An inexpensive and satisfactory Grape soda water can be obtained by blending some of the red concentrate and the Muscat.

A lightly carbonated bottled California red Grape juice consisting of a blend of Muscat and red Grape juice is believed to be worthy of commercial trial.—Pacific Rural Press.

Windolite, Unbreakable Glass Substitute.—An exhibit at Garden Week, Melbourne, which created much attention, was that of "Windolite," which is described as the unbreakable glass substitute. It is known that ordinary glass shuts out the ultra violet rays of the sun, whereas scientific tests have proved that "Windolite" admits these health-giving rays.

Particulars of this preparation, which is suitable for propagating houses and frames, poultry houses, structures for Tomato growing, etc., are quoted in the advertisement in this issue. Additional details may be obtained from various distributors, also from their Australian agents, Messrs. C. H. Leaver & Co., 524 Collins-street, Melbourne.

South Australian Fruit Marketing Association

THE monthly meeting of the Committee of the South Australian Fruit Marketing Association was held on April 7, the President (Mr. H. J. Bishop) being in the chair.

It was reported by members that the record export of 700,000 cases which was confidently anticipated in February last, would not be realised. The extraordinarily dry conditions experienced during the three months ended March 31, when only a half-inch of rain was recorded, had left the Apples at a standstill, and although the trees are still loaded with fruit, it is under 2¼in. size. The quality of the fruit already shipped has been particularly good, but it is feared that for the remainder of the season the fruit will be deficient, both as regards quality and quantity. It is extremely unfortunate that such adverse weather conditions have been experienced in a season that promised so well at the beginning of the year.

Hobart Conference.—It was decided, in view of the many important matters to be discussed at the forthcoming Australian Conference of Fruitgrowers to be held at Hobart, commencing on May 5, that it was essential that this Association should be represented. It was decided that the Association should pay 50 per cent. of the delegate's travelling expenses, and the question of finalising the appointment of the delegate was left to the President and Secretary.

Incorporation.—It was unanimously decided to proceed with the incorporation of the Association, and necessary resolutions as required by the "Associations Incorporation Act 1929," were duly passed; and Messrs. H. J. Bishop, D. Blyth, and A. O. Petersen were appointed as Trustees.

Pear Sub-Committee.—It was reported by this subcommittee that the first large shipment of Pears (over 19,000 cases) had been shipped by the s.s. "Hurunui," and it had been arranged to have the shipment carried at a temperature of 32 degrees.

A large number of growers are participating in this shipment, and the result is being awaited with considerable interest.

It was reported that the sub-committee appointed for the purpose had interviewed the Collector of Customs in regard to the closing of Customs sheds at the Outer Harbor, and satisfactory arrangements had been made.

A letter was received from Mr. George Quinn, Chief Horticultural Instructor, in regard to the times when services of fruit inspectors would be available, and also in regard to the issue of certificates, and it was reported there was a satisfactory improvement in regard to these matters, and no difficulty was being experienced now in regard to receiving certificates promptly.

S. AUSTRALIAN FRUIT IN ENGLAND.

The General Manager of the Government Produce Department (Mr. G. A. W. Pope) has received a cable from the S. Aust. Trade Commissioner in London (Mr. R. M. K. Lewis), stating that the R.M.S. "Comorin," which sailed from Adelaide on Feb. 27, 1930, and on which a fire broke out, has landed the Apples in good condition, but on examination most varieties were showing "bitter pit."

The Reinette and Maiden's Blush sold at 10/- per case, and the Cox's at an average of 14/6 gross, London.

Apples showing extra color realised good prices, the opening prices being:—Jon., 10/6 to 15/- per case; Cleo., 11/- to 13/6; Dunn's, 9/6 to 12/-.

N.Z. Cox's, 15/- to 18/-; others, 12/- to 14/-.

American Apples are still being offered, prices being as follows:—Winesaps, 9/- to 10/6; Newtowns, 12/- to 14/-.

MURRAY CITRUS-GROWERS' ASSOCIATION.

Successful Annual Meeting.

Central Packing Houses Desired—Scientific Research—The Australian Viewpoint Necessary in Organisatio

THE ninth annual general meeting of the Murray Citrus-growers' Co-operative Association (Aust.) Ltd., was held at Renmark, South Australia, on April 10. Mr. F. H. Metters, of Murray View, presided.

Mr. Metters has held the position of President of the Association for six consecutive years, and was unanimously re-elected on this occasion for a further term of twelve months. He was also recently elected as Chairman of the Federal Citrus Council of Australia.

The annual report of the Association was presented at the meeting, and disclosed some interesting facts. Since the formation of the Association some ten years ago, there has been a steady increase in membership and in the number of shares held. The past year showed a gain of 62 new shares issued, and further progress in this direction is anticipated during the ensuing financial year.

The Association is progressing in other ways. On the administrative side a complete revision of the rules has been undertaken lately. These provide for more modern methods and make provision for future developments, expansion and contingencies.

Reference is made in the report to the important part now played in the industry by the Federal Citrus Council, and it is interesting to note the strides made in recent years towards the closer linking of the citrus growers of South Australia, Victoria, New South Wales and Queensland.

The self reliance of this section of primary producers is evidenced by the facts that Government subsidies or financial assistance have never been sought.

Much credit is due to the Association for the manner in which the record crop of 1929 was handled on the Adelaide and Melbourne markets. The result attained provides an object lesosn for other sections of the fresh fruit industry, which are not so well organised. The Association is to be congratulated on the manner in which the interests of its members were safe-guarded on both markets, and growers themselves will surely feel that the support of their organisation is well worth while.

Central Packing Houses Desired.

It is the declared policy of the Central Executive of the Association to encourage the system of central packing throughout the various districts, and advances along these lines are being made. Continuous effort is still necessary to achieve the final objective, but the Executive should gain assistance by reason of the success which has attended those districts which have already adopted the system.

Good Grading and Packing Commended.

Financial facts always speak for themselves, and growers are coming to realise that payable marketing depends to a great extent on the way in which the product is offered. Regular grading, dependable quality, attractive packing and continuity of supply can only be achieved when the packing is centrally controlled.

The financial side of the Association's activities disclosed a satisfactory position, which is all to the good in these days of monetary stringency.

Various other matters of domestic importance were dealt with in the annual report, and while these are not of general interest, it is apparent from the details given, that in the Citrus Growers' Association, one section of the primary producers has an independent and efficient organisation looking after their interests.

The meeting was attended by representatives from Mypolonga, Renmark, Berri, Waikerie, Moorook, Kingston, Ramco, and Murray View.

Some interesting discussions took place regarding export arrangements for the coming season (past experience being drawn upon), and present-day opportunities and transport facilities fully considered.

It was evident that the Association, acting in conjunction with affiliated Associations in the other States, is taking a broad outlook with regard to the export position, and, indeed, in regard to all the questions which were brought under discussion, a true co-operative spirit being displayed throughout.

There are some able business men on the Executive, and growers should be able to rely upon their representatives.

As in other industries, it is apparent that individual States cannot work independently, but that joint action from a Federal standpoint is imperative.

Continuous Scientific Research Necessary.

The Association takes a close interest in other than merely marketing arrangements. It works closely in touch with experts and scientists in connection with such vital matters as bud selection, increased yield per tree, reduction of production costs, control of pests, scientific drainage, and all branches of experimental work.

Taking into consideration all the activities of the organisation, the low cost of the administration to members, is a feature that the executive may be complimented upon, and there appears to be good evidence of economical management.

In common with all primary industries to-day, citrus growing has its serious problems, but these are being gradually solved, and growers are of the opinion that they can look forward to the future with confidence.

CITRUS GROWING IN MOROCCO.

Big Order for Trees Placed in U.S.A.

Mr. W. Thomas, of the Transportation Branch, Victorian Railways, has kindly sent us a copy of a monthly U.S. paper, "The Earth," for March, 1930, which contains the following item of interest.

Big Citrus Tree Order.

> "As part of a £5,000 order of citrus trees from Southern California's fruit districts, the Yung nurseries of Elsinore, Riverside County, soon will ship 5,000 Washington Navel, Grapefruit and Valencia trees to Morocco. The remainder of the order is to be filled In Orange County.
>
> "Officials of the Morrocco Company conferred with citrus nurserymen in the Southland before placing the order. They also were reported to have been interested in the Southern California nursery stock through articles written on the topic of the citrus industry here."—Elsinore Leader-Press.

CITRUS PLANTINGS.

Varieties Recommended for New Plantings or Reworking.

TO SECURE THE MAXIMUM advantage of the Melbourne market, the following advice is tendered, in reply to enquiries, by Mr. G. E. Kitchen Kerr, the Market Manager of the Federal Citrus Council:—

Subject to local conditions, growers who want to cater for the Melbourne wholesale market requirements should plant only the following varieties:—Washington Navel Oranges, Valencia Late, Marsh's Grape Fruit, Lisbon Lemons (in the dry interior), and Emperor Mandarins, and possibly Mediterranean Sweets.

Other varieties of commons are not recommended, and the Mediterranean Sweet is only indicated for the benefit of those districts that require a variety to bridge the gap between Navels and Valencias, or that wish to make contracts with the factories for the supply of juice Oranges. Other varieties of commons will no doubt sell well, but any extension of plantings of other than the main standardised varieties is deprecated.

Of these five standardised varieties, Valencia Late and Marsh's Seedless Grape Fruit would best repay planting or working over.

Superior Strains of Late Valencia.

Special attention should be given to the possibilities of the late hanging strains of the Valencia Late type to be found in the Mildura district.

Local conditions governing the suitability of soil to the types recommended would necessarily qualify the advice given as to the varieties to develop, and in this connection growers should obtain the opinion of their district orchard supervisors. It should be unnecessary to add that growers in ordering trees or buds should bear in mind the mistakes that have been made in the past and insist on obtaining trees whose origin can be guaranteed.

HEALTH TALKS.

Diet for Blood Pressure.

(By Dr. Geo. E. Payne Philpots, D.D.S.)

(Copyright.)

Diet for Blood Pressure—High and Low.—Here are a few sample menus:—

1. **Breakfast.**—Stewed Apples, oatmeal with Dates, corn bread, malt coffee.

Lunch.—Stewed Rhubarb, Asparagus on toast, bran muffins, malt coffee.

Dinner.—Combination salad, sliced Pineapple, bran muffins.

2. **Breakfast.**—Soaked Figs, Granose biscuits, Radishes, honey, milk and water.

Lunch.—Baked Apple, toast, Prune drink.

Dinner.—Cream of corn soup, Carrot loaf, rice pudding, bran bread, Raisin drink.

3. **Breakfast.**—Mashed Oranges, gran bits and Figs, bran bread, malt, coffee.

Lunch.—Stewed Figs, poached eggs, toast, buttermilk.

Dinner.—Cream of string Bean soup, Spinach loaf, combination salad, stewed Prunes, toast, postum.

If you have any questions, please write, and I will do my best to answer them and help you.

People suffering from blood pressure, high or low, should consult a good medical man.

Fruit Tree Stocks.

(By Mr. J. H. Cutler.)

A paper read before the recent N.Z. Horticultural Trades Convention.

THE STOCK QUESTION is one that needs quite a lot of thought, research and testing, in fact, much more than nurserymen individually can give. In my opinion it requires the operation of a separate body working in conjunction with all the nurserymen to carry out experiments with stocks.

New stocks should be imported from different parts of the world, for what we want is "the best," and it does not matter one iota how good the tree variety is if the stock is unsuitable in any way. I do not infer that the stock we are using are unsuitable, some may be so, others we could hardly improve on, but my reason for bringing forward this paper is to see if any of the stocks in use can be improved on, and if so, to get to work without delay, it is a matter that will take time and, of course, it is one that will never be finished, but we must keep on the upward grade all the time. Perfection should be the ideal in front of us, even if we do not reach it. The stocks I intend to deal with in this paper are Apples, Peaches, Pears, Plums, Quinces, Cherries, Grapes, and Roses.

Stocks for Apples.

The Apples I consider the hardest to deal with, going back as far as I remember, when the Winter Majetin, and Irish Peach were used fairly largely by some growers, both were dropped for the same reason, on account of their poor root systems, which did not give satisfaction to customers, especially when the roots were cut hard back, but at the same time there was no doubt that those worked on Majetin, when they got a hold, made good trees, and never looked back.

The Irish Peach, I have very little knowledge of as a stock; other varieties used as stocks to a limited extent are "Willie Sharp" and "Cliff's Seedlings," the latter makes a very good stock, being blight proof, and also roots out more freely perhaps from stools than "Northern Spy."

Regarding Northern Spy, the stock in general use in New Zealand—this variety is admitted to be the best we have (it is always grown vegetatively), but we also know that there are several varieties that are not quite at home on it, especially on some soils. If possible, we should try to find stocks suitable for these few varieties.

Peach Stocks.

Now, the best that are now offering are hard to improve on, I refer to the North Carolina Wild Peach. Unfortunately they are not always procurable, as they are the best on the market the demand at times exceeds the supply. Could we not grow our own seed from selected plants of this desirable variety? It crops heavily, and I feel sure, whoever planted it out on a few acres in suitable Peach ground, would not regret it.

From my own experience, neither New Zealand or Australian stones are altogether satisfactory, it is rather strange that North Carolina stones are all "free" stones, whereas the cling stones from Australia are 50 per cent. better than Australian free stones. Root knot and poor germination at times are troubles with both local and Australian stones.

Norfolk Island supplies some Peach stones—my experience has not been satisfactory, as they are almost evergreen, coming up as they do in June and July, these are two bad faults, and the trees worked on them have made at least 25 per cent. less growth than on other stocks during the first year, at the same time I know of trees planted out eight years ago now doing well. The only objection is the continuous sending up of suckers during the winter, which leads one to the belief that this stock will die out earlier than others.

With regard to Plum stocks.

these are limited to a few varieties, the foremost being Myrobolan and its kindred varieties, these seem splendid for all varieties of English and Japanese Plums, also Apricots. The Myrobolan in general use in the north Island, was imported many years ago as seedlings or seed, they were very thorny, but by constant selection of clean cuttings of the green variety, and growing these from cuttings only, the type has been greatly improved.

Another stock, a form of Myrobolan, is known as "Morrison's" and is particularly suited to Apricots, but unfortunately this variety has been lost sight of, but I do not think it is extinct.

Mariana is an American variety, it is suitable for all Jap. Plums, with the exception of Ogon, and perhaps one or two others which are not grown now. This stock is also suitable for Peaches and Nectarines, with the exception of the yellow-fleshed varieties, the advantage of Peaches worked on this stock is that they can be planted on ground quite unsuited for the Peach stock, as the Mariana is very shallow rooted. I much prefer the Myrobolan for Plums and Apricots, but not Peaches or Nectarines, whereas the Mariana will only take Jap. Plums and others before mentioned.

Pear Stocks.

For Pears there are only two stocks to my knowledge that are available, namely the European and Japanese, the former has been in use for very many years, and has only been raised from seed, although all varieties succeed well on it. From the nurserymen's standpoint, it is, however, variable. It is generally unsatisfactory on account of its poor rooting habits, and if we could get a better rooting variety, all would be well. The other variety is a Japanese form, which came to this country over 30 years ago, and the one we have is a very good strain. it was selected from the seedlings, and is propagated from cuttings. I consider this Japanese variety the best we have, trees over 25 years old are known to me which are doing splendidly.

Quinces.

These are perhaps quite satisfactory. We use the common non-fruiting variety as stocks for Quinces, Loquats, and Photinias, and the French Angers Quince for Pears (in a few varieties).

Cherries.

Our stocks are limited to perhaps two or three varieties in this country, Mazzard and Mahaleb, the former being suited to all fruiting and flowering varieties. The Mahaleb is not suited to flowering varieties, and only some of these varieties strike fairly well from cuttings. Unfortunately both varieties are at times addicted to gumming. It is quite necessary to instruct French seedsmen to pack Cherry seed in light sand or another similar non-conductor, otherwise seed will not be any good on arrival—that has been our experience.

I understand they have a distinct variety of Cherry stock in Germany, that is being used there, some trees being over 100 years old; this variety would, I think, be worth investigating.

Stocks for Grapes.

On account of phylloxera, it has become necessary to graft these, and Grape stocks seem to be the only stocks (in New Zealand), that have been raised, shall we say scientifically, in any case, when it was found necessary to graft them years ago in America on account of phylloxera, the growers got busy and selected the best of the wild Grapes, found that some good growing varieties had worked on them while other varieties only succeed in certain soils, but by crossing and making extensive tests, they evolved a number of very good stocks. Two of the best are "Mouvedre" and "Respestris," the other I only know as 3316.

MARKETING CITRUS FRUITS.

Regulation of Supplies for Melbourne Market—Market Control—High Quality of South Australian Oranges—Central Packing An Advantage—No Need for Importations.

Varieties Recommended for Planting or Reworking.

Report by Federal Citrus Council Market Manager.

AN INTERESTING REVIEW of the Melbourne Wholesale Citrus Market, compiled by Mr. G. E. Kitchen Kerr, Market Manager for the Federal Citrus Council, is just to hand.

The report states that Association agents for the period April-September, 1929, handled the record quantity of 248,000 cases, 22 per cent. more than in the April-September, 1928, period, and more than the total of any season up to 1928.

Association agents handled approximately 350,000 cases for the year 1929-30, compared with 370,000 for 1928-29, the reduction being due to frost effects and the diversion of supplies, particularly of Valencias, to other markets.

Of the net wholesale market citrus arrivals, Association agents handled 64 per cent., compared with 53 per cent. last year, the increase in percentage being due to the heavy arrivals from the better organised South Australian districts. The Association South Australian proportion was 88 per cent. In 1929-30 the net wholesale market arrivals were 200,000 cases less than in the previous season, the principal reduction being from N.S.W., the reduced supply from Victoria being offset by an increase from S. Australia. The Victorian Association quota of 168,000 cases came from 22 districts through more than 30 railway stations, whereas 90 per cent. of the Association South Australian quota of 165,000 cases came through three railway stations—Waikerie, Renmark and Berri.

Approximately £200,000 on rails was returned to Association growers from the Melbourne market, the South Australian average being 16/- a case wholesale and the Victorian 11/-, the quality of some of the Victorian crop having been adversely affected by frost.

Central Packing An Advantage.

More general approval appears to be given in S. Australia to the principle of shed packing, as against private packing: some of the leading growers whose private packs had been favorably known lending their support to the movement.

The Citrus Importation Question.

Although there was a considerable reduction in the Victorian country Lemon yield, increased supplies from the metropolitan area, which now produces from 35 to 45 per cent. of the State Lemon crop, showed that there was little need for the importation of Lemons last season.

There would be less need for the importation of Oranges if growers in certain areas would hold good quality Valencias for the late summer trade.

Varieties Recommended for Planting.

Growers replanting or working over sections of their groves are recommended from the market point of view to keep to the standardised varieties—Washington Navel, Emperor Mandarins, Marsh's Seedless Grape Fruit, Lisbon (improved) Lemons, and Valencia Late. The only "commons" variety recommended is the Mediterranean Sweet. Of these varieties, Marsh's Seedless Grape Fruit and Valencias of the late hanging type growing in Mildura are specially recommended.

It is expected that the Melbourne citrus market will be heavily supplied during the coming season, and that with heavy supplies of Apples values will be at least 3/- less on an average than those obtained last season.

The Association's market control, the report concludes, has continued to ensure for the citrus grower an orderly Melbourne market in place of the alternating gluts and shortages and unjustifiably low prices that previously were experienced. This improvement has been secured by the citrus grower, member and non-member alike, at no cost to members as the expenses of organisation and market control have been covered by a reduction in the accredited agents' selling commission.

PUBLICITY ASSISTS CITRUS INDUSTRY.

In the market report of the Federal Citrus Council just issued appears the following:—

"The publicity given by the Railways Department to the use of citrus drinks and by leading medical authorities to the value of Oranges as part of a balanced rational diet, were of considerable assistance in enabling a big proportion of the crop to be marketed earlier in the season than usual.

AUSTRALASIAN FRUIT SHOW.

Uses for Hardwood Cases.

A prize of £5 has been donated by the Tasmanian State Fruit Advisory Board for the most useful articles that can be constructed from a used hardwood fruit case (18in. x 8 2-3in. x 14½in. internal dimensions).

The object of this competition is to demonstrate the uses that a case may be put to and incidentally bring the suitability of the timber for such purposes to the notice of overseas consumers. The articles will be exhibited and awards made at the show which is to be held in May.

SULPHATE OF AMMONIA.

Reduction in Price.

A reduction in price of sulphate of ammonia is announced as from April 15 to £14/3/6 per ton f.o.r. This means a 25/- reduction on prices ruling last autumn. All recognised fruitgrowers' associations will be given a discount of 5 per cent.

Citrus Preservation

Address by Dr. W. J. Young at the Recent Australian Citrus Growers' Convention.

A VALUABLE ADDRESS on the work of the Citrus Preservation Committee associated with the Council of Scientific and Industrial Research by Dr. W. J. Young Chairman of the Committee.

Dr. Young said that the real reason of the experiments was to export Oranges. The scientist would divide the life of fruit into two—the period of growth and the period that ended in death. That death may be due to injuries or starvation. Generally, the collapse took place suddenly, followed by mould.

* * *

During the past few years a large amount of work had been done on fruit, and until they knew all the changes that took place after the fruit was picked, they would be working on the hit-and-miss method.

Up to date most of the work had been done on the Apple, but the same principles applied to most fruits.

The citrus lived on the acids and sugar, and as fruit was stored those materials were eaten up.

Borax treatment was to prevent the entering of mould. The borax sterilised the skin and destroyed the mould. Paraffin wax helped to produce a new skin over a scar. Borax treatment did not do away with the need for careful handling. Investigation had been made of the temperature of storages; 38 deg. was found to be too low.

The Department was also considering the question of maturity at time of picking. Fruit should be given all the chances to live its life without attack from disease.

Careful Handling Essential.

Tests had also been made of handling methods. The Railways Department had placed at their disposal 800 cases of fruit and allowed the Committee 10 per cent. loss. A plant was installed at the Victoria Dock freezing works. The fruit was placed in a tank for four minutes and then passed over brushes for cleaning. A second tank was used, and after being in that for a few minutes the fruit was passed over a revolving towel for drying. Periodically a number of cases were examined.

The need for careful handling should be apparent, but far the greater percentage of wastage was due to bad handling. In the first experiment half the fruit was cut in the ordinary way, and for the other half the pickers wore gloves; there was a difference of 30 per cent. of loss in the two lots.

Navel Oranges packed in June and graded at the sheds in the ordinary way showed 45 to 56 per cent. mould in 11 weeks, and the fruit that was sent direct to Melbourne only 1 to 4 per cent. The machine at the docks was continuously sprayed. The dairyman was compelled to keep his dairy clean; that would have to be applied to citrus packing sheds. Some years ago he inspected a shed and found mouldy fruit in the bins.

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Dr. Young said that he had been urging on the Agricultural Department for an officer to give advice as to the need of keeping the machines clean, as well as the general condition of the sheds.

Borax Treatment.

THREE EXPERIMENTS had been conducted with borax, and in each the cause of wastage was different. After some of the Oranges had been in cold storage four or five months a brown button showed on the skin; a black mould developed in other fruit, and in the third the Oranges had lost color, resembling a frost-bite. The skin collapsed and mould showed itself all over it. The tests demonstrated that no conclusion could be drawn from one season's experiment.

Generally speaking, borax, followed by a layer of wax, had been effective; whether the difference justified the expense had yet to be proved. In one experiment with Navels in store for three months, the untreated fruit showed 25 to 46 per cent. wastage; the treated fruit only 4 per cent. Bicarbonate followed by paraffin reduced the loss to 8 per cent. The borax had been found to be the most effective, but it had yet to be proved that it was worth while for the sheds to install the plant.

Storage Temperatures.

Treated Valencias in store for five months were in good condition, the wastage being 3 to 5 per cent., and that fruit realised 30/- a case.

On temperature of storage, Dr. Young said it had been a regular custom to keep the shed down to 38, whereas at 45 deg. the fruit was found to be in excellent condition and without any sign of collapse. The brown pitting of the skin had also been eliminated.

An interesting discussion followed Dr. Young's address. In reply to a question, Dr. Young stated that ventilation was very important. The question arose as to whether paper wrappers encouraged mould. The experience of the Railways Department showed that unwrapped fruit kept better in the experiments. The main point emphasised was the necessity for the growers to use care in picking and packing.

Mr. C. G. Savage, Director of Fruit Culture for N.S.W., in moving a vote of thanks to Dr. Young, said his Department was conducting experiments with preservatives, but the results were irregular. Carbonate of soda and alum had been used; borax had given the most definite results.

It was certain, however, that most of the trouble came from the orchards and growers must exercise particular care in handling.

QUEENSLAND.

Notes and Comments.

Sugar Prices Are Oppressive.

(By Our Correspondent.)

PREVAILING conditions have, up to the present this year, been favorable for the growth of trees and the development of crops. The temperate fruit season is practically concluded, and, on the whole, can be considered satisfactory. The common enemy "fruit fly" has been almost absent, and codlin moth well controlled, though intimations received from Sydney agents re condemnation of Queensland Apples in their market, would suggest that we had a complete monopoly of the fly, but we have no desire to deny the adjoining State to all due credit in this connection, though we have no claim to share honors with it re the Mediterranean fly, probably because it refuses to become acclimatised to the surroundings—it is certainly not attributable to lack of opportunity.

Citrus fruits have appeared on the markets during the past month, in many lines obviously with the object of determining how much laxity is allowed in regard of maturity standards. The Howard district has the credit of submitting some very fine material, but, unfortunately, this does not apply all around.

The embargo upon citrus fruits is welcomed, although so far as quantities are concerned, it will not have appreciable effect, but the possibility of the introduction of citrus canker was ever present.

Disease seems to have a convenient habit of being of being overlooked where they sometimes exist, as was brought home to us by the introduction of downy mildew of the vine.

There is now opportunity for experimentation in determining the principal factors necessary for the preservation of fresh citrus, whilst preserving their general attributes. This may be commended to the Council for Scientific and Industrial Research, in preference to an endeavor to elucidate the cost of establishing an orchard particularly in this State, which ranges from distinctly temperate to extra tropical.

The Grape season, which extended over four months, has been satisfactory, and prices reasonably maintained throughout. Exceptionally fine quality was the general opinion of the products of the southern tableland.

Figs have been plentiful, but do not receive much consideration as a dessert, which may be due to the fact that cultivation is confined to the brown Turkey. The canners' price toward the end of the season was 1½d. per lb.

Large quantitites of the jam are held in stock (part from last season), and special advertising is now being practised with the object of relieving the situation by the C.O.D.

Sugar Price Oppressive.

Unfortunately, the main factor responsible for the origin of gluts of jams or preserved fruits, is either conveniently overlooked or too large to tackle. It savors of the line of least resistance being the safest one. Whoever heard them preach against their principal enemy—"the price of sugar"—which places the processed article almost amongst luxuries, yet have we not read of the Commissioners' finding in respect to the temperate fruit industry in Queensland:—"That it was not in a prosperous state, and could not afford to pay the rate for labour prescribed in the rural award, and was therefore exempted."

Compare this with **the sugar workers' award,** the highest by far for unskilled labor in the Commonwealth, such laborers being mainly southern Europeans. The latter feature applies not only to the labor, but very

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New South Wales: N.S.W. Central Citrus Assn. Ltd.
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largely to those engaging it. Admitted that sugar work is seasonal, as is also the fact that the foreign employee (frequently unable to speak a word of English), congregates in the accommodation buildings provided on the farm after the season is finished, and draws upon the State for sustenance, under what is known as the Loafers' Paradise Act. It is significant that at a recent sitting of the substitute for the Arbitration Court, that amongst the various industries represented, also the State (which is becoming notorious in such matters), to press their claim for extension of hours and reduction of the basic wage, the sugar industry had no claim to submit. Those concerned in it are well satisfied and have every possible reason for being so. The industry is a monopoly for the few, and very few at that. Enquire the price of a cane farm of fair dimensions and good land, and compare the quote with that for rural land in any part of the world—and still our politicians (State and Federal), shun the subject as they would the plague, irrespective of the hardships they thus impose on the community in general, and the orchardist in particular.

THE PAMPERED SUGAR INDUSTRY.

The cultivation of sugar cane is an absolute monopoly in the north. Competition cannot enter it in any way, neither can anyone so disposed enter into it. Land is planted under a system of permits, which prohibits the outsider becoming one of the inner circle, unless he should be in a financial position which would allow the purchase of a farm upon which a permit was in force. Production is limited according to the capacity of the mills, the price of cane is fixed—according to its sugar density—there is no bother about a market for the raw nor finished product—everything is splendidly arranged, and the consumer pays through the nose.

F. Ferguson & Son, Hurstville, N.S.W., have issued their general catalogue, containing lists of fruit trees, nuts, berry fruits, novelty Roses for 1930, climbing Roses, climbing Polyantha Roses, standards, etc. Also lists of ornamental trees, shrubs and flowering plants, hardy climbing plants, hedge plants, palms, farm seeds, Dahlias, Chrysanthemums, etc. Copies available on request.

QUEENSLAND FRUIT IN MELBOURNE.

Mr. C. Parnell, Melbourne representative of the Committee of Direction of Fruit Marketing, Queensland, reports under date April 29, that new season's Oranges and Mandarins are now coming forward. The Jaffa is the variety of Orange now being received. Custard Apples are also to hand from Cleveland. Bananas and Pineapples are, of course, the major items.

Pineapples, choice colored, are bringing 15/- to 17/- per case, and the larger counts 10/- to 12/-. The best count is that containing 18 to 21 Pines. Larger and smaller fruit is found by shopkeepers to be difficult to sell.

Bananas have eased in price approximately 2/- per case from the beginning of the month. This is deemed to be in keeping with the general easing of prices owing to the plentiful supply of local fruit on the market at the present time.

A few cases of Chokos have been received and are selling nicely. This is a pear-shaped vegetable having white flesh, and is cooked in much the same way as a marrow. It is a delicious vegetable.

The total quantity of fruit received for the month was 1,315 tons.

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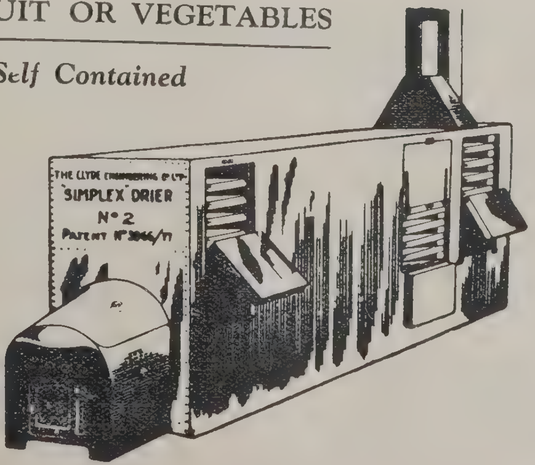

CALIFORNIAN RAISIN INDUSTRY

Dehydration: Costs of Production.

(By P. Malloch, Irymple, Vic.)

A SUMMARY of the interesting report on the Californian Raisin industry, by Mr. P. Malloch, of Irymple, was published in our last issue.

Matters of detail, however, are of interest to growers, and we now publish Mr. Malloch's notes regarding dehydration and costs of production, as follows:—

Notes on Dehydration.

It may interest growers in districts more subject to rain than Mildura in the drying season to know that dehydration of raisins can now be regarded as a commercial success. It is an essential to success, however, that sulphuring methods be adopted. A practical packing house manager stated definitely, "Dehydration without sulphuring is absolutely a failure—at the best it only produces sub-standard fruit, and often fruit which is unfit to pack."

Several dehydration companies have been formed, and they operate by purchasing fresh Sultanas from growers and processing by dipping, washing, sulphuring and dehydrating; selling the finished product to the independent packers. The price paid to growers is determined by the price of dried natural Thompson's—being about one-fourth. The costs of sulphuring and dehydrating are about £7 per ton, so the cost to the packer is about £7 per ton more than the cost of natural Thompson's. In 1928 the premium for sulphur bleached, due to the shortage of good quality fruit in U.K. markets, was nearly £20 per ton. About 15,000 tons (dried) was dehydrated in 1928, so the dehydrating companies did exceedingly well. It is anticipated that only 5,000 tons will be dehydrated this year, the reduction being due to more competition from our good quality fruit this year.

The practices of dipping, spraying, sulphuring and dehydrating, as carried out by the commercial dehydrators in Modesto, were not involved, but operators were not willing to discuss details of the operations. Mr. E. N. Seary, of Renmark, who was specially interested in dehydration, found it necessary to work on a plant for a week to learn some of the details of dehydration processes, and he is now well informed on this subject.

The fruit turned out by the dehydrators is of a bright, attractive appearance, with a percentage of dark berries in each lot. This fruit is graded in much the same way as our Sultanas. The grades and approximate percentage of each in a season's operations are as follows:—

Extra Fancy	15 per cent.
Fancy	35 per cent.
Extra Choice	35 per cent.
Choice	10 per cent.
Off Grade	5 per cent.

Samples of each grade are available at the A.D.F.A. offices. In the packing sheds as many as 30 girls are employed on a single machine to pick out the dark berries and make a perfect bulk pack.

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The question of sulphur content is important, in view of restrictive regulations adopted in the United Kingdom. Every lot of fruit is tested and those which comply with the United Kingdom standard are sent there. Those over standard are sent to the Continent. In the sulphuring process varying factors have to be taken into consideration, such as fruit condition, texture and body. Temperature and humidity also have to be taken into account.

The Pucceneli dehydrator is said to give the best results, Mr. Chapman, of Modesto, being the holder of the patent. The cost of a complete plant to process 1,000 tons of dried fruit in eight weeks is estimated at £1,200 in California.

If any of our Australian producing centres are interested in this problem, I would suggest that the growers get Mr. Seary to advise them, or to get an American operator to come over with the plant, supervise the set up and operate it for a season. Mr. D. P. Boothe, of Modesto, a plant owner and operator, stated he would be willing to do this for about £200, which would include all his expenses.

Costs of Production of Raisins.

Many figures are quoted on costs of producing raisins in California, and there seems to be a general tendency to quote the figure as low as possible. Growers' estimates of costs varied greatly from official figures, and were always on the higher side. It is general practice to regard cost of production as bare out-of-pocket costs, and any margin left over as profit. Even the official figures issued by the Horticultural Commissioner's office in Fresno are open to criticism, as they take no recognition of costs such as working plant and drying trays, or the annual charge for interest and depreciation on same. Taking a fair average on the figures collected, the actual out-of-pocket costs of producing 20 cwt. and 30 cwt. of Thompson's Raisins to the acre may be set out as follows:—

	20 cwt. per acre.	30 cwt. per acre.
Cultivation, irrigating, sulphuring and pruning (quoted at £7 to £10)	£9 0 0	£9 0 0
Harvesting, drying and carting (quoted at £3 to £4)	3 10 0	5 15 0
Taxes and insurance (quoted at 15/- to 30/-)	1 0 0	1 0 0
Water supply (quoted at 4/- to £4)	2 0 0	2 0 0
Total out-of-pocket cost ..	£15 10 0	£17 15 0
Total out-of-pocket cost per ton equals	£15 10 0	£11 16 8

To arrive at the true cost of production, however, there has to be added interest on purchase price or cost of the vineyard, also interest and depreciation on working and drying plant, and these are quite considerable items. The average value of vineyard property to-day is about £60 per acre.

It is of interest to note that pickers are paid 4 cents per 50 lb. tray of fresh Grapes harvested. Converted to our conditions, this would mean 7/6 per ton of fresh Grapes, or on a drying raio of 3½ to 1 would be £1/6/3 per ton. The contract price in Australia for the same work is £2/10/- to £3 per ton.

DRIED FRUITS.

Review of Trade in Great Britain, 1929 Season.

THE Commonwealth Dried Fruit Export Control Board advise that for the week ending April 24, 536 tons Australian Dried Fruits were sold in British markets, representing a value of £18,750. Sales included 482 tons Sultanas, at an average of £35/3/2, and 53 tons Currants, averaging £34/8/6 per ton.

As this week is the 52nd of the 1929 selling season in Great Britain, the following particulars are of special interest.

Shipments from 1929 harvest were 50,163 tons, contrasted with 13,937 shipped from the previous harvest.

Sales of 1929 season's shipments totalled 40,100 tons, which figure was easily a record as regards sales.

The total value of 1929 fruit was £1,607,910, as compared with 8,101 tons of 1928 season's fruit sold for £326,398 for the corresponding period of last year.

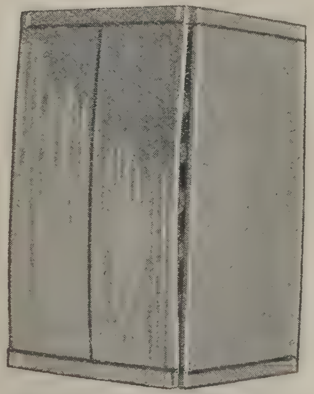
Canadian Standard Cases

C. H. TUTTON Pty. Ltd.

ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

Telephone: F 3148 (3 lines).

Telegraphic Address: "TUTBOX."



Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

The carry-over of 1929 fruit, practically all Sultanas, is 10,039 tons, compared with 5,836 tons of 1928 season, carried over to May 1, 1929. The quantity of Australian dried fruit placed in Great Britain during the past year is therefore approximately 46,000 tons, from 56,000 tons available.

Sales and average prices for the 1929 season, and for 1928 season, compare as follows:—

	1928.			1929.	
	Tons.	Average.		Tons.	Average.
Sultanas . .	11,147	£35 3 10	. .	24,748	£40 5 9
Currants . .	586	55 12 6	. .	12,402	42 11 10
Lexias . . .	2,204	33 4 10	. .	2,950	28 1 8
Total. . .	13,937		. .	50,163	

Prices obtained for Currants in 1928 were not representative as a nominal quantity only was available for export in that year. The quantity sold during 1929 was far in excess of any previous year, and the price is deemed to be very satisfactory.

A matter of considerable satisfaction is the retention of the British preference to Dominion dried fruits in the British Budget, as it is essential to Australian interests, and especially in regard to the large production of Sultanas.

Manures for Orchards.—A special offer of manures rich in nitrogen and phosphoric acid, is made in this issue by the well-known nursery and plant firm of Messrs. Stinton & Sons, Geelong. This manure is known as "Helligers' Wool-waste Fertilizer." It is finely ground, clean, has no smell, and is easily distributed dry. While possessing all the qualities of animal manures, this preparation has been shown on scientific test to contain ten times more nitrogen and twenty times more phosphoric acid than horse or cattle manure. The price quoted in this issue is £5/10/- per ton f.o.r. Geelong, 20 bags to the ton. Additional information will be supplied on request by the firm named.

DYING BACK OF TERMINAL SHOOTS OF APRICOTS AND PLUM TREES.

A MEMBER of the Hoyleton branch of the Agricultural Bureau reports that Apricot and Plum trees in his garden are slowly dying back, the trouble starting at the tips of the branches. Mr. G. Quinn (Chief Horticultural Instructor), on being asked to furnish a reply, says the decline of terminal shoots has been a comparatively frequent occurrence in many coastal districts this summer. Generally it may be attributed to the effects of the long period over which no deep soaking winter rains have been experienced. The lack of moisture about the deeper roots may results in a form of slow starvation of the tree, due to such roots perishing from the terminals backwards. On the other hand, a long period of intense evaporation occurs in a very dry year, and soils in districts of normally low rainfall usually contain fairly large quantities of injurious forms of magnesium and common salts, which, under such conditions, concentrate in the surface layers to the detriment of the roots of the trees located there. Mr. Quinn recommends cutting the trees back slightly, removing all dead wood, and, if water is available, giving each tree a good soaking by filling a ring trench, which has been opened a few inches deep around the spread of the branches. When this is soaked away, and the soil is no longer sticky, fork the trench up, level, and loosen the ground beneath and outside the spread of the branches, and then spread a mulch of loose stable manure an inch or more deep over the surface of the area occupied by the roots, which is usually considerably more than the area shaded by the branches.

"YARRA"
QUICK BREAKING
White Oil Emulsion
Easy to mix, Effective in result, Economical in quantity.
USE NOW
ON CITRUS TREES.
PARSONS & JAQUES
Manufacturing Chemists,
6 Patterson St., 155 Yarra St.,
Abbotsford, Vic.
Tasmanian Agents—
N. L. HOPKINS, HOBART.

If the trees show evidences of making new growth a few weeks later, give them another watering, but sprinkle a few handsful of, say, a couple of pounds of super and the same of sulphate of ammonia into the trench before turning on the water.—S.A. "Journal of Agriculture."

New Book of Fruit Trees.—A new book of fruit trees has been issued by John Brunning & Sons, Somerville Nurseries, Somerville, Vic. This comprises a catalogue of the fruit trees offered by the firm. There are 36 pages of old favorites and new varieties of fruits listed. Write for free copy.

NEAT EXPORT LABEL.

The "Rainbow" Brand has been adopted by the Graceburn Valley Orchard Co., of Healesville, Vic. The picture shows a red and a yellow Apple under the arc of the rainbow. It is a neat effective design.

Mistress: "When I engaged you, Jane, you told me you had no men friends. Now, nearly every evening when I come into the kitchen, I find a man here."

Jane: "Bless you, mum, 'e ain't no friend o' mine!"

Mistress: "Good gracious! Who is he, then?"

Jane: "He's my 'usband."

Hay Stack Covers
for covering hay stacks, etc., onions, wheat, wool, lucerne, etc., also as a tarpaulin.
Price: 3-Star.
12 x 20 .. .. .. £2 3 0
12 x 24 .. .. .. 2 13 6
12 x 30 .. .. .. 3 8 6
18 x 20 .. .. .. 3 8 6
18 x 24 .. .. .. 4 2 6
18 x 27 .. .. .. 4 12 6
18 x 30 .. .. .. 5 2 0
21 x 30 .. .. .. 5 17 6
21 x 33 .. .. .. 6 7 0
22 x 24 .. .. .. 5 7 0
Price: 4-Star.
12 x 20 .. .. .. £3 1 6
12 x 24 .. .. .. 3 15 0
12 x 30 .. .. .. 4 11 0
18 x 20 .. .. .. 4 11 0
18 x 24 .. .. .. 5 9 0
18 x 27 .. .. .. 6 3 0
18 x 30 .. .. .. 6 15 0
21 x 30 .. .. .. 7 17 6
21 x 33 .. .. .. 8 12 6
22 x 24 .. .. .. 6 14 6
Size 22 x 24, waggon size only, includes ropes; other sizes, ropes 3/6 extra.
Special Sizes Made to Order.
Also duck tarpaulins, verandah blinds, car covers, window blinds and all canvas goods. Please write for full list.
The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine St., Geelong, Vic.
Secondhand Sacks For Sale.
Manufactures of all Descriptions of Canvas Goods.

Trade with the East.

A Potential Market of Immense Value.

Trade Commissioner Needed.

By Our Correspondent.

THE AUSTRALIA-CHINA Commerce Corporation, a new company which has been registered in Sydney, is making plans to despatch trial shipments of fruits—dried, canned and fresh—at an early date. This company has visioned the immense possibilities of fruit trade direct to China, and is actually functioning as an adjunct of a huge concern formed in that country by influential merchants and traders there. I have taken much pains to enquire into activities which are contemplated, and find that a very determined effort will be made to establish Australian fruit on a permanent basis.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

Manufacturers IXL Jam and Canned Fruits.

Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.

All Orchard Supplies available at all times.

Agents for—

Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. LTD.,
HOBART

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.

24 Southwark St, London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA

Solicit Consignments

The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

The company has been launched with a large proportion of our capital—wool, wheat and other primary interests having rallied to the call for shares. These will, of course, exploit their own lines of industry. So far fruitgrowers have not been asked to take up a quota of shares, but I think they should assert themselves in the venture. The directors, with one exception, are Australians, that place being filled by a very influential Chinese merchant who has extensive interests in China.

The company is now arranging for a shipment of dried and canned fruits, is calling for samples, and quotes, and particularly requests that a full description of packs should accompany these. Considerable thought is being given to ensure that these fruits will be sent forward in an appropriate manner, and for that reason definite brands will be adopted. To the present, distribution has proved a disturbing factor in our exporting efforts, but the new corporation have already made arrangements which practically overcome all obstacles. In these they are receiving active support from the Chinese National Government who are prepared to effect subsidies as trade expands.

A Big Opportunity.

It now appears that the Australian fruitgrowers, particularly from Victoria, New South Wales and Queensland, are on the verge of a trade expansion which will take up all surplus supplies of certain classes of fruit. The directors so far advise that Grapes, stone fruits, and citrus, together with dried fruits, will eventually be taken in enormous quantities, and that opposition from California and other places need hold no terrors to our people. They are aware of certain trading combinations which give us an advantage against all comers, and this, combined with our closer proximity to this huge market, makes the outlook very bright indeed.

The Australia-China Company, with an already established clientele, is able to enter into the arena fully equipped to do battle. The directors know (to which the average Australian has been blind) that China, and her neighbors, with all their teeming millions, are steadily uplifting themselves to a higher standard of living. They know, too, that in China alone they can count more than treble our population in peoples who have already been educated and advanced to a civilisation equal to our own. And they know that these 20 millions or so are accessible to their contemplated trading centres.

We are actually holding the finest trading position for primary products in the whole world, and have but to gain the markets to enter upon an era of prosperity undreampt of. . . .

MARGETSON
& CO. LTD.

Fruit Importers &
Salesmen

30 James St. and James St. Warehouses,
11 Neal St.,
COVENT GARDEN
LONDON, W.C.
and at
Jamaica House,
9 & 10 Botolph Lane, London, E.C.
& 56-58 Stanley St., Liverpool

Sales by PRIVATE TREATY.
Prompt Returns & Settlements
Tel. Add.—FRUTERO, LONDON.
MARGETSON, LIVERPOOL

Head Office—Covent Garden Market, London. W.C.

Bankers:
LLOYD'S BANK LIMITED
Law Courts Branch, Strand, London, W.C.

Shipping Nos.
431 and 432

Surely we are finding our opportunities much nearer home, and of a certainty must we insist on Trading Commisioners and complete representation to ensure that every possible opening may not only be exploited, but extended until we can plant out the millions of acres which will be necessary to subsequently supply such a huge centre of a coming modern civilisation.

Quick-Acting
NITROGEN

Cuts your Overhead Expenses

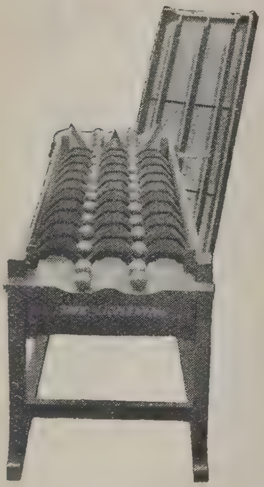
EVERY year the importance of nitrogen is stressed by agricultural experts, and every year progressive farmers and orchardists better realise, through practical experience, that nitrogenous fertilisers are profitable fertilisers. Mr. F. M. Read, M. Ag. Sc., Horticultural Research Officer to the Victorian Department of Agriculture, recommends for orchard application in the Spring, quick-acting nitrogenous fertilisers.

Sulphate of Ammonia

is the most economical source of nitrogen supply. Sulphate of Ammonia mixes well with superphosphate and potash to make a complete manure, and it makes an ideal top-dressing for independent seasonal applications.

Ask your fertiliser agent for a bag for private trial on your own holding this season.

Literature from
THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE
360 Collins Street, Melbourne.



"To Choose the Best is Wisdom"

Complete Up-to-date Equipment
for
Citrus Packing Houses
and Individual Growers

includes:—

- Washers
- Driers
- Polishers
- Sorting Tables
- Sizers
- Gravity Conveyors
- Lidding Presses
- Packing Stools
- Paper Holders, Etc.
- Ethylene Gas.

We will be only too pleased to supply particulars of equipment and blue prints of layouts to suit various sizes of Packing Houses.

Polisher Brusher.

The
"Lightning" Fruit Grader Co.
5 Hoddle St., Collingwood, N.9., Melb., Vic.
Cable and Telegraphic Address:—"Lightning," Melbourne.

Possibilities do not exclude anything we can grow, and certainly provide for juices, wines, cordials, jams and all other subsidiaries in the fruit industry. These things will not be done in a minute, but because of an already existing market far in excess of our own, we should get busy. As the market grows, so will be further plant out. China is swinging into modern ways to take her rightful place as a nation, and the time is rapidly approaching when she will resist a species of dominance which has so far stultified her own efforts. This is our hour, and we must take full advantage of the opportunity.

Karswood Poultry Spice.—The advantages accruing from the use of Karswood Poultry Spice are quoted in a letter from a user published in the firm's advertisement in this issue.

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

NEW SPANISH FRUIT PAPER.

"The Frutografico."

A new fruit magazine has just been published in Spain, called the "Frutografico." The first issue, just to hand, is well illustrated, and is mostly printed in Spanish.

It contains an article by Dr. J. Jover, who recommends the consumption of food on the basis of vegetables and fruits, pointing out the many dangers inherent to those who do not follow these rules through excessive consumption of animal foods which gives rise to multiple diseases, and observes that this error has develop a human type of stout people that were unknown in ancient times, in which age vegetables formed almost exclusively the food of man, who was then strong, agile and of moderate proportions.

Don Francisco Rueda Ferrer, Head of the Agricultural Pathological Station at Almeria, studies carefully the production of Almeria Grapes, particularly the Ohanez Grape.

There is an article on the rapid development in the Valencia district of the industry in Orange products, which constitutes a new source of wealth, one of its advantages being the better selection of the fresh fruit for export, by creating industrial uses for rejected fruits.

In this issue there is the first of a series of articles concerning the characteristics of the Valencia Fruit Production and its Competitor; and Fruit Culture in California, making reference to what may be adaptable to the typical conditions peculiar to the system established in Spain.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle Etc.

PATENTS
GEORGE A. U'REN
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"HENTY HOUSE," 499 LITTLE COLLINS ST.
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TREES

GOODMAN'S VARIETIES

Lead Always

In sturdiness of stock, in results secured, you will always find that Goodman's Trees are undoubtedly superior. Select your varieties from the list below and send in your order at once for the Winter plantings.

Prices, Special Quotes for Quantities, and full details gladly sent on request—also New Illustrated Catalogue.

ALMONDS.

- Brande's Jordan
- I.X.L.
- Ne Plus Ultra
- Papershell

APPLES.

All on Blight-proof stocks and perfectly clean.

- Cleopatra
- Crofton
- Delicious
- Democrat (Tasma)
- Emperor Alexander
- Glengyle Red
- Granny Smith
- Gravenstein
- Jonathan
- King David
- London Pippin (Five Crown)
- Munroe's Favorite (Dunn's Seedling)
- Red Delicious
- Rokewood
- Rome Beauty
- Statesman
- Stayman's Winesap
- Stewart
- Sturmer
- Yates

APRICOTS.

On Seedling Apricot Stocks.

- Blenheim (Shipley)
- Moorpark
- Newcastle
- Oullin's Early
- Royal
- Tilton
- Trevatt

CHERRIES.

On Mazzard Seedling Stocks.

- *Bedford's Prolific
- *Big Napoleon (Royal Ann)
- Big Twyford

CHERRIES (continued):—

- Bing
- Black Tartarian
- *Burgsdorf Seedling
- Early Lyons
- Early Purple Guigne
- *Florence
- Morello (Kentish)
- Noble
- *St. Margaret
- Werder's Early Black

*Also on Kentish Stock.

DOUBLE FLOWERING CHERRIES.

FIGS.

NECTARINES.

- Early Rivers
- Goldmine
- Mrs. Dr. Chisholm
- New Boy

PEACHES.

All on Peach Stocks.

- Alexander's Early
- Anzac
- Briggs' Red May
- Elberta
- Golden Queen (Cling)
- Goodman's Choice (Cling)
- Hale's Early
- High's Early Canada
- Le Vainqueur
- Levis Cling
- Mayflower
- Peak (Cling)
- Pelora (Cling)
- Phillips' Cling
- Pullar's Cling
- Royal George
- Selma (Cling)
- Triumph
- Wiggins

DOUBLE FLOWERING PEACHES.

Red, White.

PEARS.

All on Seedling Stocks.

- Bartlett (Williams' Bon Chretien)
- Beurre Bosc
- Clapp's Favorite
- Doyenne du Comice
- Howell
- Josephine de Malines
- Keiffer's Hybrid
- Packham's Triumph
- Winter Cole
- Winter Nelis

PLUMS.

- Angelina Burdett
- Coe's Golden Drop
- Diamond
- Early Orleans
- Grand Duke
- Green Gage
- Jefferson
- Pond's Seedling
- President

DAMSONS.

JAPANESE PLUMS.

- Apple
- Ballena
- Beauty
- Burbank
- Delaware
- Doris
- Kelsey
- October Purple
- Satsuma (Blood)
- Santa Rosa
- Wickson

PRUNES.

- D'Agen
- Robe de Sargeant
- Sugar

And all other Varieties, including:—
QUINCES, PERSIMMONS, PASSION FRUIT, GRAPE VINES, CURRANTS, GOOSEBERRIES, RASPBERRIES, STRAWBERRIES, RHUBARB, MULBERRIES, and MISCELLANEOUS FRUITS, CHESTNUTS, WALNUTS, FILBERTS, LEMONS, ORANGES, Etc.

We also carry excellent stocks of—
HEDGE PLANTS, ORNAMENTAL TREES AND SHRUBS.

C. J. Goodman
Picnic Point Nurseries-Bairnsdale
VIC.

(W-McF.)

BLISTER DISEASE OR CRACKING OF APPLES

The Dunn's Variety is Particularly Susceptible.

Successful Remedial Measures in New Zealand.

(B. G. Goodwin, N.D.H. (N.Z.), Orchard Instructor, Christchurch (late of Mapua), New Zealand.)

MANY VARIETIES of both Apples and Pears are subject to a disease which causes cracking of the skin, in some instances extensive. Especially is this the case with the Dunn's Favorite Apple, which will be referred to more particularly in these notes. This variety has in the past been extensively planted for export, but owing to the trouble with cracking experienced during recent years, the quantities exported have diminished by thousands of cases. A large number of fruitgrowers have already reworked this Apple with other varieties, being of the opinion that nothing could be done to successfully combat the disease.

Cracking of Dunn's has been general throughout New Zealand, irrespective of difference in climatic conditions or quality of soil, both rich and poor classes of land giving similar results in this respect. The appearance of the disease on both trees and fruit is so well known to growers of the variety that a description might be considered superfluous. However, for the benefit of any orchardists who are not so familiar with the trouble, a brief description will be given.

On laterals it is abundant on one and two-year-old wood. On this growth it appears in the form of small irregularly shaped blisters, which stand above the surface of the bark. These blisters may occur singly, scattered over the surface of the bard, or aggregated into groups forming large and irregular areas. Generally they have an unbroken surface, but on older wood the blisters not uncommonly crack across, giving to the bark a rough and scabbed appearance. When the blisters are scattered, their presence is difficult to detect, but when confluent they are quite conspicuous.

On fruits a russeted condition is produced, but if affected when young, large unsightly cracks may be formed. These are more prevalent near the stem end of the fruit, but occasionally are to be found on the side, and where badly affected the cracking extends completely round the Apple. These cracks are usually large, crescentic, possess rounded edges, and are quite rough to the touch.

The trouble may be regarded as due more to general debility of the tree than from other causes, the Conothecium disease (to use the mycological name) being an aftereffect. This is suggested by the fact that practically all the sound fruit to be found on trees that are affected through not having received proper treatment are situated near the top, where the growth is stronger. The lower buds have become so weakened and immature through the debility of the trees that it is impossible for them to maintain sufficient vigor to produce sound fruit.

Following up these deductions it is obvious that

the stamina of the tree

should receive first consideration in order to produce fruit free from cracking.

This increased stamina can be induced by practising a system of heavy pruning, combined with manuring and cultivation.

All lateral wood growths and subleaders should be removed entirely, and where fruit spurs are prolific these should be thinned out and shortened in length, leaving only plump and well-formed buds. Where main branches or leaders are numerous these should be reduced, leaving not more than ten to fifteen, according to the growth-inducing conditions of the soil. Such a system of pruning not only assists in restoring the vitality of the tree (which is the main object in view), but also the greater portion of the affected wood

A brief account of some of the many successes that have been obtained in Nelson Province, where experiments have been recently carried out under the writer's supervision, will now be given.

In the Upper Moutere district, from an orchard bearing a heavy crop of Dunn's Apples, only between 40 and 50 cases were fit to be exported during the 1928 season. The system of pruning as described was carried out during the following winter, together with applications of basic slag, blood-and-bone, and sulphate of potash. The results obtained were astounding, the quantity

The "Gay" Rotary Sprinkler
(Brickhill Patent)
For Citrus, Strawberries, Vegetables, and Lucerne

The No. 3 Gay Sprinkler on tripod stand spraying rain evenly 66 feet diameter. PRICE 70/-.

The Gay Sprinkler attached to light moveable pipe lines are creating a stir in connection with spray irrigation of Citrus.

The Advantages of the Gay Sprinkler System over flooding, chanelling, and the old crude methods of overhead watering have appealed to the leading growers of Citrus in the Murray River districts.

LEADING FEATURES of this Australian Patent are as follows:—

1. Accurate breaking up of the spray to gather nitrogen before the drops reach the ground.
2. Distributing the rain evenly by a thoroughly spreading four sprays from one Sprinkler.
3. Completely covering the greatest area and maintaining the even spread.
4. Thorough cleansing of foliage from the peculiar spray action thereon.

For further particulars apply to THE "GAY" SPRINKLER AGENCY CO., 91 Rushall Crescent, NORTH FITZROY, N.7, Victoria. Phone JW2821.

Mr. Grower !

This Concerns You

The basis of all schemes for improving soil fertility should be the maintenance of a certain amount of organic matter in the soil

Nearly all soils are benefited by occasional dressings of dung

The Reasons are Obvious

A light soil is assisted to retain moisture and withstand drought.

A heavy soil is rendered lighter, more porous and is consequently easier to work.

Carbonic Acid is evolved which helps to corrode phosphates and liberates potash in the soil.

Ammonia and potash are retained and are regularly and uniformly liberated as the plants need them.

The amount of Plant Food in dung is relatively small and the chief advantage resulting from its use, as a basis of successful manuring, are rather secondary than direct.

You cannot purchase this dung but you can purchase

Helligers' Wool Waste Fertiliser

which is purely organic, **possesses all the qualities of dung** and contains ten times more nitrogen and twenty times more phospheric acid than horse or cattle manure.

The price is reasonable, **£5-10-0** per ton, f.o.r., Geelong Twenty bags to the ton. Reserve your supply now. Output limited.

SOLE SELLING AGENTS:

STINTON & SON

Established Over Half a Century

Claremont Nurseries, Geelong

of Apples exported from the same trees during the 1929 season amounting to 376 cases, an increase of over 300 cases. Moreover, at time of writing there was a splendid show of fine healthy fruit-buds for the next season.

In another orchard at Mapua, during the 1927 season, only 65 cases of Dunn's were fit to be exported owing to the fruit being badly cracked. Following out the system of pruning advocated, the export from the same trees has increased to 250 cases in 1928 and 1929.

As showing that **hard pruning is essential** to restore vigor to the Dunn's variety and enabling the trees to produce fruit free from cracking, another local case may be mentioned. An orchardist did not prune a portion of his Dunn's, intending to work them over with some other variety, but this he failed to do through pressure of other work, and the trees, being in a debilitated condition, practically failed to set any fruit; what few Apples did set were worthless, owing to being cracked to pieces. The remainder of the trees, which were pruned back severely (otherwise having exactly the same treatment as the first-mentioned trees), set a good crop, having a nice clear skin, and practically free from any sign of cracking.

As already indicated, however, pruning alone is not sufficient to combat the disease.

Manurial treatment is also necessary to promote vigor, and for this purpose the following manurial combinations have been proved to materially assist the trees to produce payable crops, the quantities named being the per-acre rate: No. 1: 3 cwt. basic slag, 2 cwt. blood-and-bone, 1 cwt. muriate of potash. No. 2: 1½ cwt. sulphate of ammonia, 3 cwt. blood-and-bone, 1 cwt. sulphate of potash. No. 3: 3 cwt. fish-manure, 1 cwt. muriate of potash. One or other of these combinations should be applied as follows:—

No. 1: The basic slag (approximately 3 lb. per tree) at the latter end of May or early in June, ploughed in, as it is a slow-acting manure. The blood-and-bone (2 lb. per tree) and the muriate of potash (1 lb. per tree) in early spring—early in September—and either ploughed or well disced in.

No. 2: Blood-and-bone (3 lb. per tree) and sulphate of potash (1 lb. per tree) ploughed in at the latter end of August. Sulphate of ammonia (1½ lb. per tree). Lightly cultivated in at the beginning of October.

No. 3: Muriate of potash (1 lb. per tree) ploughed in early in June. Fish-manure (3 lb. per tree) in early September, after the second ploughing is finished.

Whatever combination is used, it is also necessary to apply lime at the rate of 1 ton per acre, where such has not been recently applied.

Lastly thorough cultivation must be recognised as essential throughout the season. Ploughing twice is far better than ploughing once. The soil should be turned over in early autumn—that is, the end of May or beginning of June—and again in early spring, immediately after the green-tip spray has been applied—usually about the early part of September. The ground should then be disced; and, as too much discing is inclined to make the soil run together and dry out, from then onwards it should be kept stirred up by the use of the cultivator. The number of cultivations given can only be determined by weather conditions; if dry conditions prevail, more cultivation will be required than if the weather is wet.

If these essential factors of pruning, manuring and cultivating are properly attended to, the growers of Dunn's Favorite need have no doubts about the production of a good crop of marketable fruit.—"N.Z. Journal of Agriculture."

GRAPE—"WALTHAM CROSS."

Extinct in England.

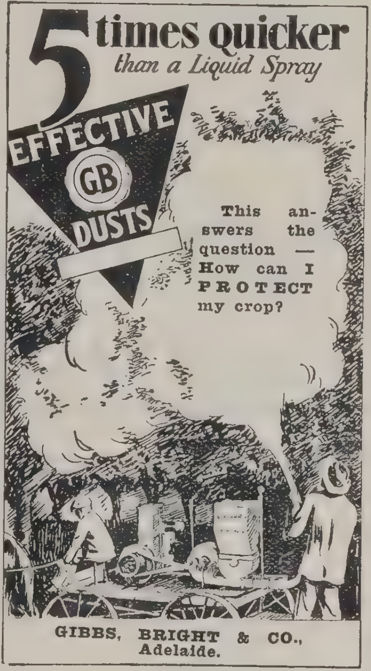
This variety was sent out by William Paul some fifty years ago, but never became very popular, and we believe is about extinct in this country; at least we have never seen or heard of it for many years.

Last week we saw a consignment of it from South Africa and were informed that it is now one of the best Grapes grown in that country. Another instance of the effect of climate and conditions in modifying the character of a fruit.—"Horticultural Advertiser," Eng.

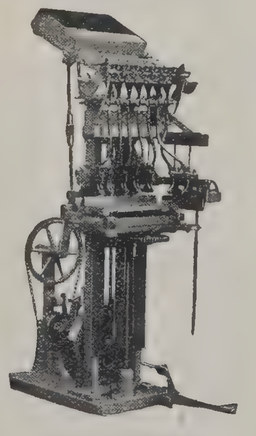
* * *

The Waltham Cross Grape is one of the most popular varieties grown in Australia.

DUSTING



BOX MAKING
MILLERS' BRITISH-MADE NAILING MACHINES.



SOLE AGENTS,
GIBBS, BRIGHT & Co.
27 Grenfell Street, ADELAIDE

COOPER PRODUCTS

I UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

N.S.W.—
William Cooper & Nephews (Australia) Limited, Sydney, and Agents.

Victoria—
Cooper Engineering Co. Ltd., Melbourne.

Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

A NEW SEEDLING APPLE, "HOPTON."

ATTENTION at Melbourne Garden Week last month was directed to a new seedling Apple, shown on the stand of the Burnley Horticultural Gardens. The Apple was recently brought under the notice of Mr. E. E. Pescott, F.L.S., the Victorian Government Pomologist, by Mr. Hewitt, a grandson of the raiser.

Fifty years ago, Mr. E. Hopton owned one of a group of several famous fruit tree nurseries at Fyansford, near Geelong. Subsequently, he became Vine Inspector for the purpose of clearing out Phylloxera. In his later life he raised this seedling Apple; but, strange to say, it has not previously been brought under official notice.

It is, of course, difficult to say what the Apple will prove when grown on Apple soil. At present it is an extremely rich red and beautiful Apple; crisp, juicy, and of a very good flavor. Its suitability for export must be determined later; but all indications seem to point that the Hopton Apple should fulfil an exceedingly useful place in following on after Gravenstein, ripening before Jonathans are ready. In any case, its beauty should give it a ready sale anywhere.

NITROGEN FERTILISERS PTY. LTD.

The Australian Sulphate of Ammonia Propaganda Committee has gone out of existence, and a new organisation to be known as Nitrogen Fertilisers Proprietary Limited will carry out, on a much more extensive scale, the work which the Sulphate of Ammonia Committee has done for nearly 9 years past. Its major educational activity will be personal contact with primary producers by specially trained field officers, and in addition to this, will handle all sulphate of ammonia produced locally, and will import sulphate of ammonia to make good the deficiency between local demand and local production.

The Australian Sulphate of Ammonia Propaganda Committee was interested in propaganda only.

Mr. W. V. Blewett will direct field work and propaganda generally, while the field officers in each State will maintain contact with the agricultural and horticultural public. Already a number of fertiliser experiments have been planned in each State, and these will ultimately be extended to cover a much wider range of crops under the varied climatic and soil conditions which obtain in Australia.

Field officers already appointed are:—N.S.W.: K. C. Wallace, H.D.A., Box 481, A.A., G.P.O., Sydney. S.A.: S. R. Cockburn, Nile-street, Glenelg, S.A. Vic.: O. H. Gepp, B.Agr., Sc., 376 Collins-street, Melbourne.

The registered office of the company is 360 Collins-street, Melbourne, but Mr. Blewett, to whom all matters of a technical nature should be referred, will be located at 376 Collins-street, Melbourne. The Secretary is Mr. W. B. Edwards.

Goodman's Fruit Trees.—The firm of C. J. Goodman, Picnic Point Nurseries, Bairnsdale, Vic., has been established for 41 years. Trees from these nurseries are now appearing in every State of Australia and in New Zealand, and are giving satisfaction. The 1930 catalogue is a publication of much interest, containing helpful hints for fruitgrowers. Those desiring copies should write without delay.

"HARVEY"
Tunnel Dehydrator

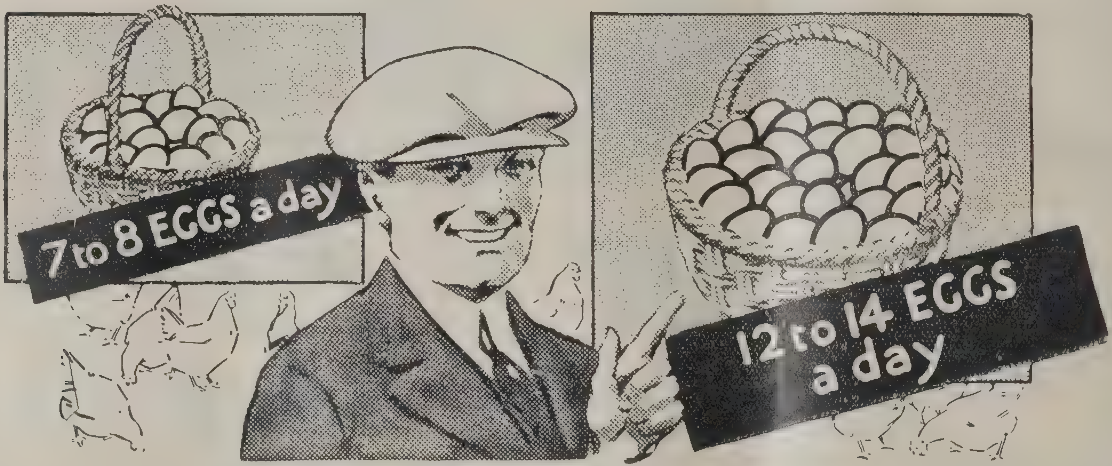
The
Latest Idea
in
DRYING
FRUIT
VEGETABLES
and
Other Products

WRITE FOR PARTICULARS TO
D. HARVEY
ORCHARD & VINEYARD IMPLEMENT SPECIALIST.
FRUIT GRADERS & DEHYDRATORS.
POWER LIFT, TRACTOR, FARM & ORCHARD IMPLEMENTS
BOX HILL, E.11. - - VICTORIA
AGENTS ALL STATES

D. HARVEY
DEHYDRATOR

Without KARSWOOD

With KARSWOOD



The writer of the first letter published below relates how he increased his production from 7 and 8 eggs per day to 12 and 14 eggs per day by feeding his 18 fowls with Karswood Poultry Spice. Karswood Poultry Spice increases egg production to an amazing degree, but it brings about its results in a perfectly natural manner. It does not force, because it contains no forcing ingredients. It does however contain ground insects, which provide just those constituents (including organic phosphorous) necessary for the formation and growth of large sized eggs. A tablespoonful in the evening mash is enough for 20 birds. Buy a packet to-day and prove its efficacy to your own profit.

"From 7 Eggs a Day to 14 Eggs a Day"

Dear Sir,

I have only 18 fowls and two roosters. Before I started to use Karswood Poultry Spice I used to only get 7 and 8 eggs a day; but since using Karswood Poultry Spice, I have obtained 12 and 14 eggs a day. I can highly recommend it to anybody who has not used it and I am sure they will be of the same opinion as I am. Wishing you every success in your business.

(*Sgd.*) *E. G. J. Mascot.*

Original letter on file for inspection.

"Always Have Eggs—Winter and Summer"

"I would like to let you know what results I have obtained from your Karswood Poultry Spice. I first gave it to 9 Black Orpington Pullets 6 months old, they were laying 5 to 6 eggs per day, but after a fortnight of Karswood Spice I got, 7, 8 and 9 eggs per day and they kept same up for the winter months. I now give it to all my fowls with the result I always have eggs winter and summer, and again my fowls always look healthy. Different travellers who have called at my place say they have never seen fowls in all their travels that looked as healthy as mine. Again thanking you for your great help. I might say you can use this as you like."

(*Sgd.*) *GEO. McDERMOTT.*
6/6/29 *Amphitheatre, Victoria.*

"From 1 Egg a Day to 8 Eggs a Day"

I have much pleasure in informing you that I was only getting about 1 or 2 eggs a day from eight hens, but, since using Karswood Poultry Spice, I have been getting eight eggs per day and the chickens and ducks are growing wonderfully. I will recommend it to anyone.

(*Sgd.*) *MRS. MACDONALD, Euccrabendinni E.*
23/10/29 *Bowraville, N.S.W.*

Note the Economy

1/- packet supplies 20 hens for 16 days; 2/- packet supplies 20 hens for 32 days; 13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

2.M.30

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

Hatching Ducks.

Methods of Incubation and Selection of Eggs.

"THIS is rather an interesting subject, perhaps, because there is not yet any 'best' method," writes Walter Heale in "Eggs," the official organ of the Scientific Poultry Breeders' Association (Eng.). "Some breeders support the hen hatching of duck eggs, while others are equally enthusiastic over the hatching of the eggs by means of incubators. As with other branches of poultry keeping, where there is a divided opinion, each point of view has much to support it. When I am asked which method of hatching I advocate, I am obliged to point out that each case must be treated on its merits. It is fatal to generalise without being in full possession of all the facts, in each case with which one is dealing. If only ducks are kept, or if large numbers of ducks are kept, then obviously all or most of the hatching will have to be done by means of incubators. If only a few ducks are to be raised every year, and a broody breed of fowls is kept on the farm, then it will usually be wiser to hatch by means of hens. There is no doubt that the hen can generally be relied upon to give better hatching results with duck eggs than can be obtained with incubators. This advantage is, however, much offset by the extra trouble of managing the hens, and the difficulty of getting broodies when they are most needed.

Khaki Campbells in a well sheltered yard at the Broadleigh Egg Farm, Spring Vale.

Hatching by Hens.

"Hatching, by means of hens, is generally understood, and beyond giving the broody a good sitting box, a peaceful position, and sufficient food, there is little else to do. The actual incubation of the eggs can be left confidently to the hen, which is, after all, doing something of which she is a past-mistress. Before leaving the subject of hatching by hens, we should like to remark on the use of the term 'Natural hatching.' Hatching by means of hens is not natural; in fact, it is rather the opposite. The 'natural' hatching of duck eggs is obviously under ducks, which is not an entirely satisfactory method. When comparing the hen and the incubator, as hatchers of duck eggs, we must not lose sight of the fact that both methods are to some extent artificial, even though the incubator is more so than the hen.

"As has so often been written in reference to hens' eggs, the percentage hatch is as dependent upon the condition of the breeding stock, as upon the running of the incubator. We have always contended that if the egg is a really hatchable egg when it is put into the machine, it will hatch unless conditions are very bad.

Selecting Eggs for Hatching.

"In selecting duck eggs for hatching, there are several points to bear in mind, the observance of which will result in better hatches.

"DON'T set eggs which have been exposed to the frost. Such eggs are most times useless for hatching, and only take up valuable space in the incubator or under the hen.

"DON'T set eggs which are more than seven days old. We have found that the hatchability of duck eggs deteriorates rapidly after they are six or seven days old. Those eggs which do hatch, often produce weaker ducklings than would be the case if fresher eggs had been used.

"DON'T set ill-shaped, thin-shelled, or undersized eggs. Even if these do hatch they will produce birds which are hardly worth having.

"DON'T set dirty eggs, but wipe them off with a damp cloth before putting them into the machine.

Classified Advertisements.

FOR SALE.—Orchard farm, 130 acres, near Geelong; 20 acres orchard; good house.—Apply "Connewarre," c/o "Fruit World," Box 1944, G.P.O., Melbourne.

FOR SALE.—One 5 h.p. Simar Rototiller and two extra sets of tines, £100 cash.—Particulars from E. Mann, Seedsman, Charters Towers, Queensland.

Soil Sterilisation.

Important for Tomato Culture.

Information Supplied by the Cawthron Institute, Nelson, to the N.Z. Horticultural Trade Convention.

DURING THE LAST FIVE YEARS we have had many opportunities to carry out experiments in Nelson Tomato-houses on the question of soil sterilisation. In addition, we have watched the extension of this practice in Nelson houses until, in all probability, 75 per cent. of the growers have adopted sterilisation as an essential part of soil treatment.

Although the Nelson Tomato industry may have some special features which differentiate it from Tomato culture in other parts of New Zealand, I cannot but think that the results obtained in Nelson warrant an extended trial of soil sterilisation in all Tomato-houses in New Zealand which have been in use for a period of years.

In Nelson, the Tomato industry has been firmly established for the last 20 years. Growers found that unless the soil in their houses was changed every four or five years a great drop in Tomato production was inevitable. In certain houses where the soil had not been changed for a long period the growing of Tomatoes became unprofitable. In such houses yields of 2 to 3 lb. per plant were common.

With the advent of soil sterilisation, Tomato-houses formerly giving the above yields became equal to the best in Nelson. Yields of 6 to 7 lbs. per plant were quite common in such houses after steam sterilisation.

One of the most successful growers of Tomatoes in Nelson at the present time, owes his success entirely to the adoption of steam sterilisation of the soil.

It is not possible at the present time to state to what extent various factors were responsible for the low yields which were the rule in a number of Nelson houses.

In all probability the following factors were responsible for low crop production on these soils:

(1) Fungous diseases transmitted through the soil, e.g., wilt.
(2) Nematodes, e.g., eelworm which attacked the roots of the plants.
(3) Harmful protozoa, which preyed on useful types of bacteria.
(4) Possible toxic compounds accumulated in the soils as a result of long continued growth of one crop.

Although it is impossible to say to what extent one or all of these factors have operated in the production of low crop yield it can be stated that where steam sterilisation of the soil has been carried out efficiently, they have to a very large extent been eliminated.

We have tried both

steam and chemical treatment

in the sterilisation of the soil. Of the chemicals carbon bisulphide has given us the best results in glasshouse work. It must be remembered, however, that carbon bisulphide is likely to be most effective against eelworm and low forms of life, and is not likely to give satisfactory results against fungous and bacterial disease. (In Nelson, eelworm infestation has been a great source of trouble to a number of growers.)

Steam sterilisation has given us better results than any chemicals so far tried.

Steam treatment is more expensive than chemical treatment, but where bacterial diseases are known to occur in the soil, it sems to be the only form of treatment which is entirely effective.

Winter Treatment.

Steam sterilisation is performed during the winter. The soil should be dry and an interval of 3 to 4 weeks should elapse after steam sterilisation before planting. The apparatus used in Nelson for steam treatment consists of a boiler generating steam at a pressure of 60 to 70 lb. per square inch. The boiler is connected by means of piping and hose to a harrow-like machine with hollow spikes. The spikes are perforated so that when the machine is placed into position, steam enters the soil from several small holes on each spike. As a rule three to five minutes are required for the treatment of each square of soil. The harrow is then removed to an adjoining square until the whole of the ground has been covered.

Steaming 18 inches of Soil.

By far the best results have been obtained by steaming the soil to a depth of 18 inches. Where bacterial disease or eelworm infestation is known to occur, this procedure should be adopted. Steaming to the 18 inch depth is carried out in the following way. The top 9 inches of soil is stripped from a section of the house and wheeled to the other end. The lower spit is steamed and the top soil of the next section is thrown on to the steamed spit. This is steamed with the apparatus in the same way as the lower spit.

If steam treatment of the soil is undertaken, every precaution must be taken to prevent the houses being reinfested with disease transmitted through the soil. On this account it is desirable that all houses be steamed at the same time, and that all potting soil used for seed or seedlings should be steamed. All boxes used for seed or seedlings should be disinfected at the beginning of each season. All seed should be carefully selected from plants free from diseases, and should be disinfected with dilute formalin before sowing.

In regard to the effect of steam on the chemical constituents of the soil, it is known that a number of changes are effected. The nitrogenous compounds become more available, and on this account care should be taken to avoid excessive nitrogenous manuring after steam treatment.

Estimated Cost of Steam Sterilising Apparatus.

AN EXPERIENCED TOMATO GROWER with eight large houses, recommends the following plant as suitable for the grower in a fairly large way:—

(1) A six to eight horse-power boiler. The cost of a new boiler of this type would be about £200, but perhaps a few could be picked up secondhand for half this price.

(2) Two sterilising plates with hollow spikes, each 2 ft. 6 in. by 2 ft. 6 in. Estimated cost about £15 per plate.

(3) Fifty feet of rubber hose at 3/- per foot.

(4) One hundred and twenty feet of galvanised iron piping at 1/- per foot.

With this plant a glasshouse 100 ft. by 28 ft. could be sterilised in two and a-half days. Three men would be required to operate the plant at its greatest efficiency. One and a-quarter tons of Westport steaming coal at £3 per ton would be used for each 100 ft. of glass.

For the small grower with two or three houses, a two horse-power boiler would be adequate. Only one steri-

(Continued on Page xviii.)

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney.
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne.
Andrew, Fred J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Markets.
Lister, G., Western Market.
McKean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King St.
Silbert, Sharp & Davies, Western Markets.
Stott & Son, T., Western Markets.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
H. Wilson, Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants Assn., J. D. Fraser, Temple Court, 428 Collins St., Melbourne.
Young, J. H. & Co. Pty. Ltd., Western Market.

QUEENSLAND.

Brisbane.
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J. & Co., Fruit Markets.

TASMANIA.

Hobart.
E R. Cottier Pty. Ltd., 88 Collins St.
Jones & Co. Ltd., H., Fruit Exporters.
Peacock & Co., W. D., Fruit Exporters, and at London.
Launceston.
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin.
Co-operative Fruitgrowers' of Otago Ltd.

GREAT BRITAIN.

London.
Guerra & Co , Long Acre, Covent Garden.
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co., Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull.
Connelly Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip and Co. Ltd., 7 Bridge St., Sydney.
Manchester.
The Port of Manchester, rep., W. J. Wade, 8 Bridge Street, Sydney.
Liverpool.
MacGeorge & Jardine.
Woodall & Co.
Bristol and Southampton.
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin.
Connelly, Shaw Ltd.
Glasgow.
Russell, Turnbull & Co.

GERMANY.

Bremen.
Fruchthandel, Gesellschaft.
Hamburg.
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof, Reps. J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam.
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen.
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

AUSTRALIAN FRUIT SALES.

London, April 28.—There was a good demand for Apples at the sales of Australian fruit in London, and large sales have taken place. The following prices were realised:—"Barrabool," "Naldera," and "Orford" shipments:—W.A.—Cleo., 10/6 to 12/- a case; Jons., 10/- to 11/6; Dunn's, 11/6; Romes, 10/- to 10/6; Sturmers, 9/-, and Esopus, 8/- to 8/6 a case. S. Aust.—Jons., 11/- to 11/6 a case; Cleo., 12/-; Vic. Cox's, 10/- to 14/-; Dunn's, 9/6 to 11/6; Jon., 7/9 to 12/-; Londons, 9/6 to 10/3; Reinettes, 8/6 to 9/3; Cleo., 11/6 to 12/6; Granny, 17/- to 18/-. N.S.W.—Jon., 9/3 to 13/6; Cleo., 11/- to 11/6; King Davids, 8/9 to 9/9; Adams, 8/6 to 9/9; Londons, 8/6 to 11/9 a case; special Cox's, 5/6 to 6/6 a tray; special Jon., 4/6 to 5/- a tray. Tasmanian.—Cox's, 11/6 to 16/- a case; Worcesters, 8/6 to 11/-; Cleo., 9/9 to 12/-; Mobb's, 9/3 to 12/6; Londons, 9/9 to 10/-; Alfristons, 7/9 to 12/-; Scarlets, 8/6 to 10/6; Blenheims, 9/6; Wellingtons, 11/- a case. Pears.—Victorian—Howell's, 12/- to 13/- a box; Packhams, 13/- to 14/-; Beurre Boscs, 13/- to 16/6; Jos., 14/- to 16/-; W. Nelis, 10/- to 12/9 a box; other packages proportionately. Tasmanian—Beurre Boscs, 5/- to 5/3; Duchess, 3/- to 3/6 a tray.

Messrs. Parnham Pty. Ltd. quote the following cabled prices from Messrs. White & Son. Ltd. (the White Service) of fruit sold at London ex the steamers "Naldera" and "Barrabool":—"Naldera"—Jon., 9/6 to 12/3 a case, bulk 10/- to 10/6; C.O.P., 13/- to 15/6 a case; Londons, 10/- to 11/- a case; King Davids, 10/- a case. "Barrabool"—Dunn's, 10/6 a case; Jon., 9/- to 11/- a case, bulk 9/6 to 10/-; Londons, 9/9 to 10/6 a case. The cable message further advises that there is an improvement in the color of the Jonathans. Market firming.

AUSTRALIAN FRUIT IN ENGLAND.

The following is a copy of a cable received by Barker, Green & Parke Pty. Ltd., 533 Collins-street, from Simons & Co. Ltd., London:—

"Delphic."—Cleos., 10/6 to 12/6; Jonathans, 10/- to 13/3; Cox's, 12/- to 17/6; Dunn's, 10/- to 11/-; Munroes, 9/- to 10/-; Alfriston, 7/9 to 12/6; various, 7/6 to 10/9.

Later advices from the same firm state:—"Cormorin."—Cleos., 10/6 to 11/9; Jonathans, 10/- to 13/-; Davids, 11/- to 12/-; various, 8/- to 10/6. "Otranto."—Pears, 13/6 to 15/-.

NEW ZEALAND.

Dunedin, 17/4/30.—Reilly's Central Produce Mart, reports prices as follows:—Peaches, cases 4/- to 6/6, crates 3d. to 5d.; Blackberries, 4d. to 8d. per lb.; Cape Gooseberries, 10d. lb.; Strawberries, second crop, choice 1/- to 1/6, jam 8d. to 10d.; Grapes, local Hamburgs, 1/4 to 1/6½, Kakanui 1/4 to 1/7½, local Gros Colmars 2/3, Australian Cornichons 1/-; Apples, Cox's 10/- to 14/6, Del. 8/- to 10/6, Jons. 6/- to 8/-, other desserts 4/- to 7/-, cooking 4/- to 6/6; Conference Pears 6/- to 8/-, W. Coles 8/- to 10/-, other desserts 5/- to 7/-; American Navels, 40/- to 50/-; Mission Lemons, 47/6; Grape Fruit, 42/-; Bananas, to arrive, 27/6.

NEW SOUTH WALES.

Sydney, 23/4/30.—The State Marketing Bureau of the N.S.W. Department of Agriculture reports as follows on April 23:—

Passion Fruit were scarce and dear, and brought up to 22/- for choice.

Grapes sold steadily, and prices were unaltered. Black varieties realised 3/- to 7/-, and white 2/- to 4/- per half-case.

Pineapples.—Large supplies were available, and there was a consequent easing of 1/- per case for choice. Closing quotations were:—Choice, 11/-; others, 8/- to 10/- per tropical case.

The Easter holidays fell within the period under review, and the City Municipal Markets were closed on Good Friday and Easter Monday. Owing to the likelihood of the weather being wet during the holidays, buyers were cautious and did not stock up heavily. After the holidays there was a good attendance of buyers, who reported satisfactory retail business during the holiday week-end. Ample stocks were available in the markets to meet these buyers' requirements, and there was little change in prices.

Apples sold fairly well at unaltered rates, but after the holidays there was an indication of prices becoming firmer owing to the possibility of smaller supplies arriving from Tasmania. Ruling rates were:—Jonathans, 5/- to 9/-; Granny Smiths, 5/- to 9/- per case.

Pears sold steadily, and prices were firm at 3/- to 8/- for Packham's Triumph and 4/- to 8/- for Josephines. Other varieties ranged to 7/- for choice quality.

Stone Fruits.—There are only remnants of Peaches and Plums on offer.

Citrus Fruit.—Conditions improved, but prices remained fairly steady. Rates for Oranges were:—Navels, second crop, 3/- to 12/-; other second crop, 3/- to 6/-; Lemons realised 4/- to 9/-, but closing prices were higher at 5/- to 10/-; and Mandarins were available at 8/- to 16/- per case.

Bananas.—Prices were practically unchanged, but were firm for choice quality lots. Agents were accepting reduced prices for fruit which had ripened during the holidays. The following was the range of prices:—Special, 32/- to 35/-; choice, 26/- to 30/-; standard, 20/- to 24/-; plain, 10/- to 16/- per case.

Victoria.

Melbourne (3/5/30).

The following prices are supplied by the Wholesale Fruit Merchants' Association of Victoria:—Apples: Good to choice eating, 2/6 to 4/6 a case; good to choice cooking, 2/- to 3/-. Green Bananas: Queensland, special and choice, to 26/- a double case; standard, 19/- to 24/-; plains, 15/- to 18/-; rust-affected lines, much lower. Grapes: Demand so small and carry-over will be so great that a firm price cannot be quoted. Lemons: Average quality, 7/- to 8/- a case; few specials higher. Grape Fruit: Queensland, 17/-. Oranges: Queensland, best counts, 13/- to 14/- a case, larger counts, 10/- to 11/-; specials, to 16/-. Mandarins: Queensland, Emperors, 18/- to 20/-; few frells, 16/- to 18/-. Valencias: N.S.W., 4/- to 8/- for average quality; few good counts and special quality , to 10/-. Passion Fruit, 18/- to 22/-; some special lines higher. Pears: Practically no demand. Pineapples: Queens, best counts 15/- a double case, few specials 16/-; larger counts, 10/- to 12/-; over 30, lower. Tomatoes: Practically no demand; only a few sales above factory rates.

The Melbourne market manager of the Federal Citrus Council of Australia reports:—"There is a limited demand for new season's commons and navels. Sales were as follow:—Thompson's navels, specials, best counts, to 20/-; small, to 16/-; commons, best counts to 15/-, smalls to 12/-. Mandarins: New season's, best counts to 20/-. Grape Fruit: Best counts, to 15/-. Second-crop Valencias, 6/- to 10/-. Lemons: Best, to 12/-."

Queensland.

Brisbane (29/4/30).

Local Fruit.—Oranges, navels, 6/- to 10/- bush. case; common, 5/- to 8/-. Mandarins, Emperors, 9/- to 13/-; Scarlet, 8/- to 13/-. Lemons, 2/- to 4/- quarter-case. Grape Fruit, 2/- to 4/-. Pineapples, smooth 5/- to 8/- case, rough 8/- to 11/- case. Apples, 4/- to 6/6 case. Grapes, Muscatels, 5/- to 9/-; P.C., 11/-; G.C., 3/- to 5/-. Custard Apples, 3/- to 5/-. Imported Fruit.—Pears, Vic. W.C., 9/- to 11/- bush. case; Kaps, 5/- to 7/-; Howells, 6/- to 7/-; B.B., 6/- to 8/-; Keefers, 6/- to 7/-; Tas. B.B., 7/- to 8/-; N.S.W., 7/ to 11/-. Apples, Vic. Jons., 6/- to 7/-; Tas. Jons., 7/- to 8/-; L.S., 6/- to 7/6; L.C., 7/- to 8/-. Grapes, N.S.W. black, 4/- to 5/-.

West Australia.

Perth (26/4/30).

Apples, Dunn's Seedlings, flats 4/6 to 7/6, dumps 7/- to 12/-; Rome Beauty, 4/6 to 7/6, 6/- to 11/6; Granny Smith, 4/6 to 8/, 1/- to 14/6-Cleopatra, 5/6 to 7/6, 8/- to 13/- (others from 6/6); Jons., 7/- to 10/-, 9/- to 18/- (others from 6/-); Yates, dumps 11/- to 16/-; other varieties, 5/- to 11/-. Citrus: Oranges, plain, flats, 10/- to 15/-, dumps 18/- to 24/6. Navels, flats, 9/- to 16/-. Lemons, 5/- to 12/-. Pears, Bartlett, 6/6 to 14/-; other varieties, flats 2/6 to 6/-, dumps 5/6 to 13/-. Grapes, open, white colored 5/- to 10/-, closed 2/- to 5/-. Passion, half-bushel 5/- to 13/6.

South Australia.

Adelaide (29/4/30).

Apples, cooking, 2/6 to 3/6 case. Bananas, 28/- to 30/- crate. Figs, 7/- to 10/- case. Grapes, 4/- to 5/- half-case. Lemons, 16/- to 18/- case. Plums, 4/- to 5/- case. Peaches, 5/- to 6/- case. Pears, 3/- to 6/- case.

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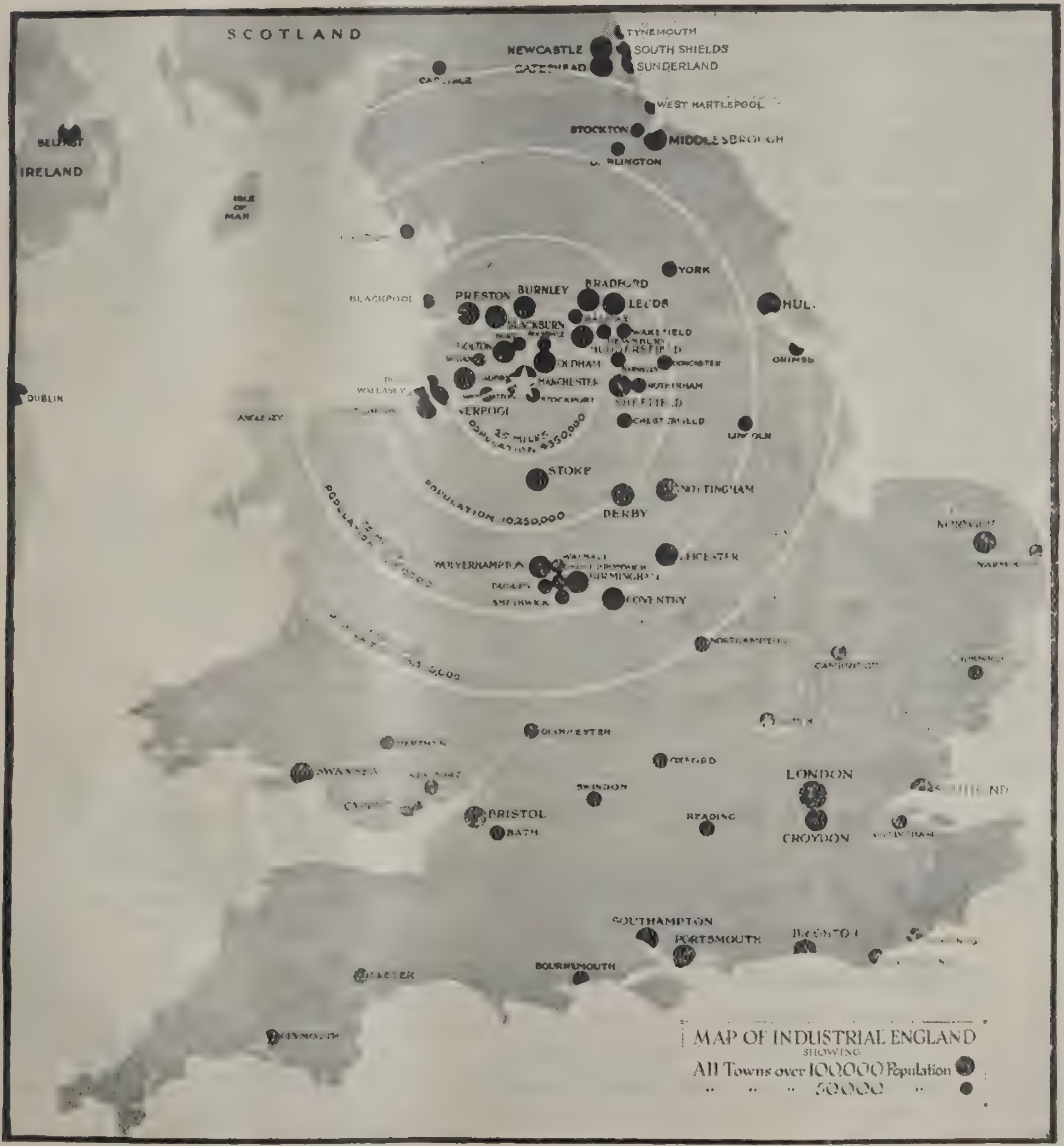
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Soil Sterilisation. (Continued from Page 212.)

lising plate could be employed with the lower power boiler. The initial cost of the smaller plant would be less than half that of the larger plant. More than double the time would be required for sterilising a given area of ground, and running costs would be rather higher than those with the larger plant.

Growers possessing no plant of their own frequently make arrangements to have their glasshouses sterilised by contractors who have the necessary plant. As a general rule £9 to £10 per 50 feet of glass is charged. Even at this cost, the steam sterilisation of many of Nelson glasshouses has proved very profitable to the growers.

Description of "Grid" or "Plate."

This consists of an inverted galvanised iron tray, 2 ft. 8 in. by 2 ft. 6 in., with sides 3 in. deep. On the inside of the tray, spikes project at right angles, while steam distributing pipes are placed on the top or reverse side of the tray. The spikes are 12½ in. long—hollow and pointed at the end. The spikes are 7/10 in. external diameter. There are seven rows of spikes one way, and six rows of spikes the other way. The spikes in the second row are placed opposite the mid-point between spikes in the first row. There are four holes ½ in. diameter in the spikes. The holes are made in sets of two and are drilled right through the pipe. This facilitates cleaning if the holes get blocked. The first set of holes is about 1¼ in. from the end of the spike. The second set is 2½ in. from the end.

Experience has shown that two small grids are more convenient to handle than one big one.

There is no objection to making a grid with longer teeth, but I doubt very much whether you will gain anything by it. In order to push the 12 in. spikes well down into the ground, considerable pressure on top of the grid is required. The soil must be well loosened and must be in a good state of tilth to allow of easy penetration. Unless you could loosen the subsoil or unless your subsoil is light in texture, I doubt whether you would be able to push the machine down to the required depth without undue exertion.

Tomato-growers use two grids 2 ft. 6 in. square for a 6 h.p. boiler.

Large plates have been abandoned for smaller plates. It is best to have the holes near the bottom of the spikes. The spikes should be so arranged as to ensure even distribution of the steam throughout the square of the treated soil. Further experience in the use of the sterilising plant will suggest other modifications.

The thermometer was used in the early stages of our work in order to see how even was the heating of the soil. Many alterations in the arrangement of spikes and distributing pipes were made before we were satisfied with the uniformity of heating in the square of treated soil. Provided the boiler has a steam pressure of

60 lb. to the square inch,

and the soil has been loosened, and is in a friable condition (lumps should be avoided) experience has shown that 3-5 minutes steaming is required to raise the temperature of the soil to boiling point. As soon as steam begins to escape vigorously from the sides of the machine, the plate should be transferred to the next square of soil, the treated section should then be covered by sacks. The temperature of the soil treated as above remains in the vicinity of 212 degrees F. for some considerable time. After 24 hours the temperature is frequently above 150 degrees F.

Further experiment in regard to the value of lengthening the initial time of steaming is required. The machine becomes very difficult to handle if allowed to stand more than five minutes on any section of soil with steam full on.

* * *

The reading of the foregoing was supplemented by letters from two growers, Messrs. H. S. Young and H. Stuart, both of whom have up-to-date steam plants which they have found to be most satisfactory.

Messrs. Dallinger and Waugh said the value of sterilisation was undoubted; the latter claimed to have the oldest steam plant in the Dominion.

The President, Mr. Davies, said he was about to set up a plant himself. What he had seen and heard had convinced him that no nursery could afford to be without a sterilisation plant.

A useful general discussion followed.

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MILDEW ON APRICOT AND PEACH FRUITS.

TOWARDS the end of December last, specimens of mildew on Apricot and Peach fruit were forwarded by the Horticultural Branch of the Department of Agriculture to Mr. G. Samuel, M.Sc. (Plant Pathologist at the Waite Agricultural Research Institute) for identification. Since mildew has not previously been recorded on stone fruits in South Australia, the following particulars may be of interest, states the South Australian "Journal of Agriculture." The mildew on Apricots (caused by the fungus Sphaerotheca sp.) was obtained on a single tree at Gawler by Instructor J. B. Harris. Mr. Harris stated that the tree had been affected similarly, but not so badly, last year. Adjoining trees were quite healthy, and it was only the fruit of the affected tree which was mildewed, there being no sign of mildew on leaves or twigs.

The mildew on Peach was obtained in the Torrens Valley by Instructor J. Hunter, and was likewise present only on a single tree in a small garden. An effort is being made to eradicate the trouble in the two cases which have come under notice. The affected fruit has been picked, boiled, and fed to fowls, and three thorough sprayings with lime-sulphur are being given at intervals of a fortnight.

When the leaves have fallen, a further spray with winter-strength lime-sulphur will be given, and then one more lime-sulphur spray when the buds are bursting in spring. Mr. Brittlebank, until recently Plant Pathologist of the Victorian Department of Agriculture, and now engaged on a Plant Disease Survey for the Council for Scientific and Industrial Research, reports that mildew on Apricots and Peaches was recorded in Victoria as long ago as 1913; then again in 1922, since when many specimens have come to hand.

The climate of South Australia is drier than that of Victoria, and mildews are well known to be most troublesome in slightly moist situations in an otherwise dry climate. It seems well worth while, therefore, to attempt to eradicate the disease from South Australia while it is apparently restricted to two isolated cases, for there is little doubt that it would find congenial conditions for development in many of the stone-fruit orchards of this State if once it was introduced into them.

The effort at eradication is by no means without hope, for the brown rot of stone fruit, which is firmly established in the Eastern States, and causes considerable annual losses in Peaches, Plums, Cherries, and Apricots, has not been seen in South Australia for the last 20 years or more, although it was recorded from this State by McAlpine in the eighteen-nineties.

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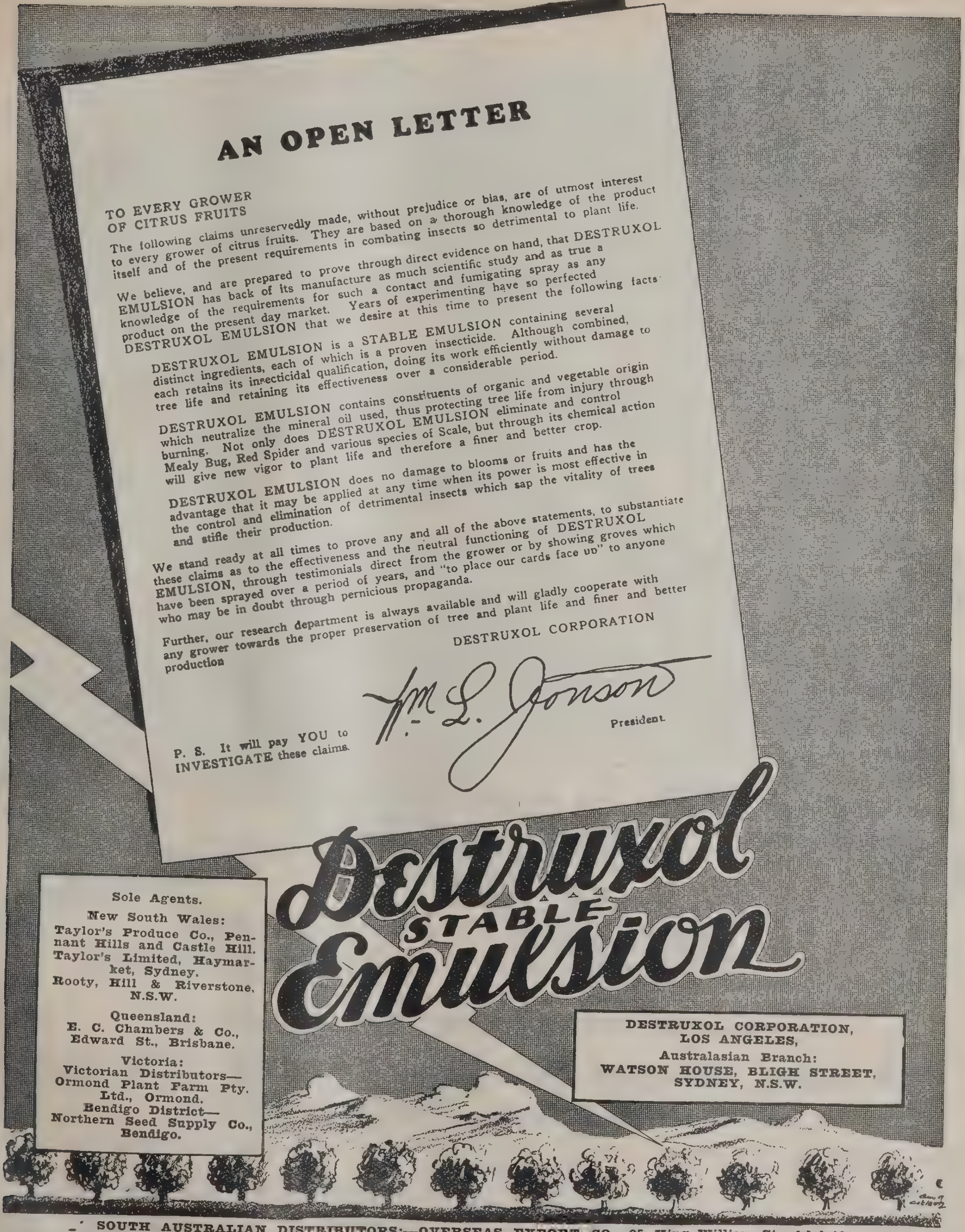

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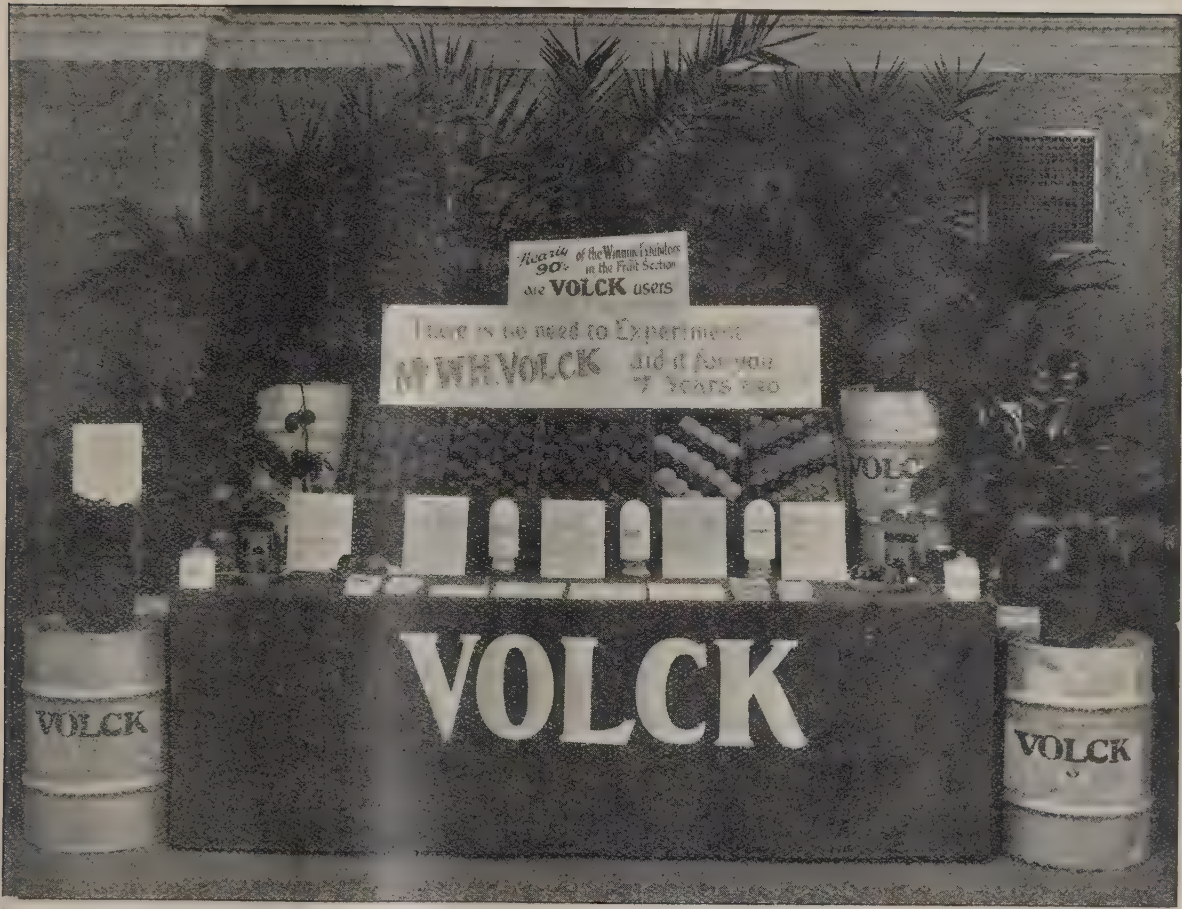
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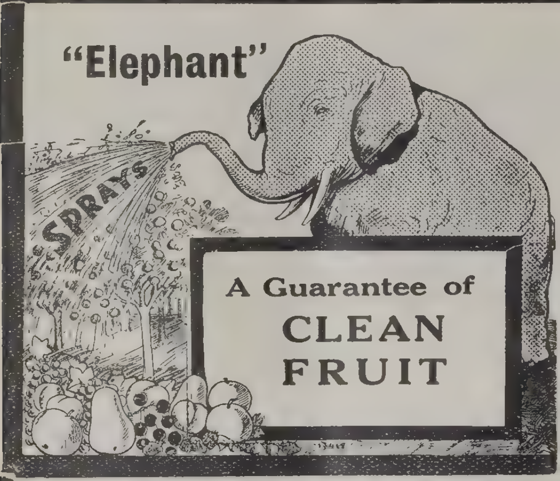
Queensland Agents: **The Australian Fruit & Produce Co., Fruit Exchange, Brisbane.**



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Published the First of Each Month.

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Tasmanian Director:

Hon. L. SHOOBRIDGE, M.L.C.

PERSONAL.

Mr. J. W. Barker (Barker, Green & Parke Pty. Ltd., fruit exporters, Melbourne), is sailing by the "Maloja" on June 3, on a visit to England and the Continent.

Mr. C. J. Parnham (Parnham Pty. Ltd., fruit exporters, Melbourne), is travelling by the same steamer.

Disembarking at Marseilles, they will visit Paris and Hamburg and other places on the Continent before going to London.

Conditions relating to fruit export from Australia will be investigated, also methods for strengthening the Victorian Fruit Marketing Association. of which both Mr. Barker and Mr. Parnham are on the Executive Committee.

Mr. F. W. J. Moore, of London (previously of Tasmania), was presented with an illuminated address on behalf of the National Fruit Trade Federation, on his retirement from business. Mr. Walter Greenwood, in making the presentation, eulogised Mr. Moore's services.

Mr. J. P. Piggott, M.H.A., of Tasmania, spoke favorably of Mr. Moore's work on behalf of Tasmanian fruitgrowers.

Australian Conference of Fruitgrowers.

Important Session at Hobart.

Grading Regulations: Softwood Cases: Citrus Maturity Standards: The Sugar Position.

Next Conference, Brisbane, July, 1931.

THE EIGHTEENTH AUSTRALIAN CONFERENCE of Fruitgrowers, held at Hobart from May 5 to 9, was entirely successful. Delegates attended from every Australian State, and much important business was transacted.

The last Conference of this character was also held at Hobart, in 1924. Prior to that time Conferences were held regularly once every year in the several State capitals. The break in continuity was due to the activity of the National Fruit Council, which, under Government auspices, functioned for some years. This Council depended for its authority on the creation of State Fruit Advisory Boards. However, as this form of organisation did not meet the needs in the majority of the States and as the National Fruit Council ceased holding meetings, the need was expressed for the Australian Conference to resume its annual sessions, and opportunity was taken to combine the function with the Australian Fruit Show which was being held at Hobart.

Under ordinary circumstances the Australian Conference would have been held at Brisbane, but the Committee of Direction of Fruit Marketing and its manager, Mr. W. Ranger, courteously agreed to waive the right in favor of Hobart; further, Mr. Ranger handed over the Presidentship to the Hon. L. M. Shoobridge, M.L.C., of Hobart.

Delegates and Visitors.

In accordance with established practice, all fruitgrowers present took part in the discussions, but, of course, only the appointed delegates voted. Each State voted its full strength—three votes—even though a lesser number of delegates were in attendance. Delegates and visitors attended as follows:—

Commonwealth Government Representative.—Mr. H. M. Thompson.

Chilean Government Representative.—Senor H. Gonsalez.

Tasmania.—Hon. L. M. Shoobridge, M.L.C. (President), Mr. P. H. Thomas, Senior State Horticulturist, Hon. W. H. Calvert, M.L.C., Messrs. S. J. Kelleway, H. A. Court, J. H. Astell, G. McGowan, and others.

Queensland.—Messrs. W. Ranger and J. Gregory.

N.S.W.—Messrs. C. G. Savage (Director of Fruit Culture), H. G. Such, and A. R. Herring.

W. Aust.—Messrs. F. L. S. Willmott, T. Skinner, F. Simper.

S. Aust.—Messrs. C. W. Giles, G. Mack, G. Parsons, A. Petersen, W. J. Bishop, H. K. Caldicott, Heddle, Max. Vickers, R. A. Crammond, A. Cobbledick.

Victoria.—Messrs. J. M. Ward (Supt. of Horticulture), C. M. Griffeth, J. H. Lang, R. E. Fowler, J. D. Grant, G. W. Peart, R. Bailey, J. A. Parkes (Federal Citrus Council), A. F. and E. Thiele, H. V. and J. V. Wilson, V. Lawford, T. W. and A. A. Brunning, W. L. Gregory, D. P. Murray, R. Haysey.

Hon. Secretary, R. E. Boardman.

An apology was received from one of the Victorian delegates, Mr. J. B. Mills, through illness. Mr. R. E. Fowler was elected as the third Victorian delegate.

The Minister for Markets, Hon. Parker Moloney, telegraphed his regrets for inability to attend, wishing the Conference success, and promising consideration to any resolutions brought before him.

The Sydney Chamber of Commerce, on behalf of its Fruit Merchants' Section, telegraphed good wishes.

In opening the Conference, the Premier, Hon. J. C. McPhee, said the fruit industry was of the greatest importance to Tasmania. The export value of the State's fruit products was more than all her other primary products combined, with the exception of wool: the fruit industry provided a tremendous amount of employment. He was sure that all the questions before the Conference would be looked at from the Australian viewpoint.

Secretary's Report.

The Hon. Secretary presented his report on the activities since last Conference. The matters dealt with included:—Relief from sugar burden—rebate of duty on softwood shooks exported—prohibition of citrus fruits—immature Orange legislation—scientific research, etc. One result of the break in the continuity of the Conferences had been the cessation of the activities of the Pomological Committee. There was a widely expressed desire for this Committee to resume its appreciated services.

A group of some of the delegates and visitors photographed at Mt. Nelson, near Hobart.

Reduction of Export Varieties.

Mr. A. R. Herring (N.S.W.) moved—

> That this Conference emphatically protests to the Prime Minister's Department against the proposed curtailment of Apple and Pear export from the Commonwealth, and regards as intolerable that Federal inspectors should determine the conditions governing the industry.

The decision to materially alter the grades, stated Mr. Herring, had been made after a conference of fruit inspectors, and the growers had not been consulted. This was extraordinary procedure, especially as the American top grade was below the Australian second grade.

Mr. H. G. Such seconded. While inspectors were efficient in their own sphere, the Federal Government should not accept their advice alone without consulting the growers.

Mr. H. M. Thompson said the Government had acted in the best interests of growers, and was supported by the Imperial Economic Committee and the British Ministry of Health: the Tasmanian State Fruit Advisory Board endorsed the Government's action in reducing varieties for export, with the exception of the Crow Egg variety.

Mr. J. M. Ward, speaking with considerable warmth, said the Government had done the right thing. The "inspectors" were the Chief Horticultural Officers in each exporting State.

The Tasmanian Senior Horticulturist (Mr. P. H. Thomas) pointed out that New Zealand exported 50 varieties, and the Government was quite willing to guarantee 11/- per case. Alfristons were one of the best commercial varieties in Tasmania, and it had been suggested seriously that the variety should be eliminated. The same applied to Crow's Eggs. No grower would ship varieties which landed him in debt. Unprofitable varieties would in time eliminate themselves.

Messrs. S. H. Kelleway, J. H. Lang, and W. Ranger spoke to the motion: they agreed that the sincerity of the Government was not in question, but better methods were possible.

At the suggestion of Mr. Lang, Mr. Herring altered his motion as follows, which was then carried unanimously:—

> That this Conference emphatically protests to the Prime Minister's Department against the methods of curtailing the Apple and Pear export from Australia, and is of the opinion that before any action is taken the growers should be consulted.

A committee consisting of a delegate from each State was apopinted to go into the matter of the grading regulations, and to prepare a report for the Conference.

Better Packing for Export.

Mr. W. L. Gregory, of the Gerrard Wire Tying Machines Co. (and previously an officer of the Victorian Department of Agriculture), gave an interesting address re better packing and preparation for export (to be published next issue), and was accorded a hearty vote of thanks, on the motion of Mr. Herring, seconded by Mr. A. F. Thiele.

Empire Preference.

The Chairman moved—

> That this Conference strongly urges the Prime Minister to approach the next Imperial Conference in Great Britain with a view to giving preference to Empire Apples and Pears, imported into the United Kingdom by a protective tariff, of, say, 5/- per cwt. on all fruit from outside the British Empire, and also strongly urges that if the said preference be granted, all necessary precautions be taken to prevent exploitation of fruit being sent through British possessions other than fruit grown in the British Empire.

Mr. S. J. Kelleway seconded the motion, and it was agreed to.

Trade With Germany.

On the motion of Mr. Kelleway, seconded by Mr. Lang, it was agreed—

> That this Conference strongly urges the Minister for Markets to make every effort to come to an agreement with the German Government in connection with the "Favored Nation Clause" of the German tariff, as was agreed upon between the German and New Zealand Governments, and also the U.S.A. Government with regard to fruit importations into Germany from Australia.

Eastern Trade.

Mr. Lang moved—

> That this Conference strongly urges the Federal Government to consider seriously the advisability of appointing a delegation to investigate and report upon the possibilities of extending Australian trade in fresh, dried and preserved fruits, and other products in Eastern countries.
>
> In view of the possibility of substantial export trade with the East being built up with fruit and other products, the time is opportune for the appointment of a Federal Trade Commissioner in the East.

He admitted that there were many disabilities to be overcome before trade relations in the East were placed on a firm basis.

Mr. Thompson said that the matter had been before the Minister for Markets for some time, and the Government had decided to appoint a trade representative in the East. It was possible that the selection of the representative would be made at an early date.

Captain H. Black (Tas.) spoke of the excellent possibilities of trade between Australia and the East, particularly China. There should be a trade in fresh, dried and preserved fruit, beef, mutton, and possibly flour. Australia could produce unlimited quantities of primary products needed in the East.

Mr. G. Mack (S.A.) said that shipments of tinned goods to Java and Singapore had not brought good returns.

Mr. Robert Hall (Tas.) emphasised that there was an excellent market in India for Apples.

The motion was carried.

Imported Softwoods.

Mr. H. G. Such (N.S.W.) urged that a protest be made against the increase in duty on imported softwood timbers. He said that the citrus growers were obliged to use soft wood for case material; hardwoods were unsuitable. Orders for suitable timber placed in Queensland could not be met.

The Chairman said that there were unlimited quantities of hardwood in Tasmania suitable for the export of Apples, but the citrus growers needed softwoods. It would be difficult to frame a motion which would meet with the requirements of the various States.

Mr. S. J. Kelleway (Tas.) said there was a diversity of opinion on the case question. He thought the time would arrive when softwoods would be used more extensively. If there was a heavy duty on imported softwoods, before long the local case materials would rise in price. Much of the hardwood used for cases was not fit to be used for packing fruit.

Mr. Such moved—

> That this Conference deplores the recent increases of duty on shooks and timber for fruit case shooks, and requests that no further increases be imposed, as already heavy burdens have been placed on the industry.

Mr. J. H. Lang (Vic.) contended that the duty should be no greater than that recommended by the Tariff Board.

Mr. C. M. Griffeth (Vic.) moved as an amendment—

> That as the Federal Government has, by increasing the tariff, made it impossible for fruitgrowers to obtain supplies of softwood cases in shooks at reasonable prices, this Conference looks to the Federal Government to take steps, by removing the duty on the importation of this timber in logs from within the British Empire, or by other means to ensure the supply of softwood cases to fruitgrowers at the same price as paid prior to the increases in the tariff.

Mr. Lang seconded the amendment, which was agreed to.

The Apple Industry.

Mr. J. M. Ward read an interesting paper dealing with the Apple industry of Australia, and was accorded a hearty vote of thanks. (This paper is to be published next issue.)

The Sugar Industry and Fruitgrowers.

Mr. R. E. Boardman read a paper showing the adverse effect of the Sugar Agreement on the fruit industry. Several growers spoke in support. Mr. Ranger defended the Sugar Agreement. (This subject is reported in another column.)

On the motion of Mr. Boardman, seconded by Mr. C. W. Giles (S.A.), the following resolution was carried unanimously:—

> That this Australian Conference of Fruitgrowers, after consideration of various aspects of the sugar position as affecting fruitgrowers, desires that a conference be held between sugar and fruit interests with a view to reconciling conflicting standpoints.

Organisation in the Several States.

Representatives of various States reviewed the progress of interstate marketing organisations. Mr. G. H. Mack said that the South Australian Fruit Marketing Association, which was formed last year under the appreciated guidance of Mr. H. G. Colombie, was functioning well. The Association was comprised of shippers and growers, the latter having the weight of the voting power. Much had been done towards controlling and standardising packing, grading, and labelling, the elimination of unsuitable varieties, adoption of a standard case, etc.

Mr. R. E. Boardman (Vic.) presented a report on the Victorian Fruit Marketing Association, which was a cooperative organisation of growers and shippers to advance the fruit industry, particularly the export trade. The Association was active in securing the full rebate of duty on imported softwood shooks and was vigorously fighting the effort to secure an embargo on softwoods. Railway concessions were being obtained. The improvement in the handling of export fruit was very satisfactory.

Mr. W. Ranger reviewed the position in Queensland, and detailed the activities of the Committee of Direction of Fruit Marketing. A 60 per cent. majority was able to control the position in theory, but it worked exceptionally well. It was a compulsory type of organisation, binding upon all sections of fruitgrowing, and aimed at stabilisation by removal of surpluses, concentrating rather on the factory side. £12/10/- per ton was paid for Plums last season. Prices were fixed, and arrangements were made for wholesale dealing.

The Chairman: "I suppose the price of sugar is fixed too?" (Laughter.)

In the Queensland organisation, continued Mr. Ranger, every grower was a shareholder, and profits made were credited to him by the Committee. They had 100 per cent. control, which enabled business to be done effectively. By means of the funds thus made available in the different sections, it was possible to finance the establishment of packing houses, and soon a chain of these would be operating. An advertising campaign had cleared a line that was dragging—fig jam. Pinepples had been lifted from 2/6 to 5/3 per case. The Committee of Direction sold the fruit to the canners and also sold the whole pack of canned Pineapples.

The Chairman raised the question of over-production, and described the position of the Tasmanian hop industry. Hops could not be sold outside the Commonwealth.

Mr. H. G. Such (N.S.W.) said that so far no attempt had been made in that State to form a State-wide cooperative organisation, but there was the nucleus of such in the packing houses. On the Murrumbidgee irrigation areas a co-operative effort embracing three centres had secured good results. The export trade in Grapes was developing. For canning Peaches growers had a five-year contract at a satisfactory price. The Prune section seemed to be heading for disaster because of the heavy surplus. All the co-operatives got together, and launched a big programme for increasing the consumption, with the result that stocks were cleared and the demand for Prunes could not be filled. The N.S.W. Fruitgrowers' Federation, which operated because of the orchard tax, was not a trading organisation: it dealt with matters of policy.

Hon. J. Murdoch, M.L.C. (Tas.), said that the two last speakers were so optimistic that it had done him good to be present. But advances to co-operative companies on the mainland had had a detrimental effect on Tasmanian production. He felt that the Foveral Government had given an unfair advantage to the New South Wales Peach growers in a bounty which enabled the Peaches to be sold in England at a lower price than the Tasmanian fruit could command. Tasmanian Apricots were actually selling the New South Wales Peaches.

Mr. F. Simper (W.A.) said that an organisation called the W.A. Fruit Shippers' Association comprised the whole of the fruit shipping agents, two of whom handled 90 per cent. of the Western Australian fruit exports. Estimates of the crops were obtained early through the Department of Agriculture, and shipping space was then engaged. As regards local marketing, an Act had been asked for, but was not granted. In Perth fruit was sold by auction. Improvements could be made if growers would ration supplies instead of sending indiscriminately. For export the hardwood (jarrah) case was preferred.

ROBERT HARVEY EVAPORATIN

At Port Cygnet, Tasmania—R. Harvey's Apple drying works, wood-wool and case factory.

Australian Fruitgrowers' Federation Proposed.

Mr. Shoobridge said that, linked with the formation of the Australian Apple and Pear Growers' Association was the Pomological Committee. He reviewed the organisations of such nature in England and America, and suggested the formation of a Society which should provide an authority for all fruitgrowers throughout Australia. It might be worked on the same lines as the Conference, but it should be a permanent body, with an Executive Council to control it. Interstate visits could be made, and shows held in various States. He moved—

> That a Society should be formed to embrace all branches of fruitgrowing in the Commonwealth to deal collectively with matters affecting the fruit industry.

Mr. Herring thought it would be better that organisations already existing in the various States should combine in a Commonwealth-wide organisation, rather than that a new body should be formed.

Mr. Lang (Vic.) was of a similar opinion. There were several bodies in Victoria; two Apple producing groups and a citrus group, and he hoped that these might unite.

Mr. C. M. Griffeth said he was convinced the industry would benefit by having an Australian-wide organisation.

Mr. Simper (W.A.) said he was in favor of a body to control the fruit industry of the Commonwealth. When there were more bodies than one there was a tendency for the shippers to play one off against the other.

Mr. Wilmott said that one of the troubles in West Australia was lack of funds, and the Government consistently refused them power to make a levy. He thought a body such as that outlined would be very beneficial. Each State should have a representative sitting on a committee in Melbourne. Every organisation in his State had been voluntary. Fruitgrowers were not, as a whole, loyal —a few hundreds joined up, and the remainder were quite content to accept benefits, but would not pay for them. It seemed that compulsion must come at last.

Mr. H. Thompson (Department of Markets) said his department would welcome the formation of an Australian-wide organisation.

Mr. W. Ranger (Q.) said he wished for a Federal organisation, for which the time was now ripe.

An amendment by Mr. Griffeth, seconded by Mr. Herring, was carried—

> That it is desirable that a central council representing all States be formed, and an endeavour be made to improve and strengthen the constitution of this Conference.

It was further agreed that each State should appoint a representative to confer with the Secretary (Mr. R. E. Boardman) in Melbourne.

Citrus Fruits.

On the subject of citrus fruits, Mr. H. G. Such (N.S.W.) moved—

> That the State departments of all States be requested to take in hand the necessary inquiries to enable them to recast the regulations governing the existing maturity standard for the various varieties of Oranges, and the regulations governing the determinatin of dry citrus fruits.

Mr. A. R. Herring (N.S.W.) seconded, and Mr. C. G. Savage (N.S.W.) spoke to the motion. As a departmental officer, he offered no recommendations, but would like assistance in improving departmental methods.

Mr. J. M. Ward (Vic.) mentioned the difficulty of administering regulations in Victoria, where Oranges were imported from the other States.

Mr. J. A. Parkes (Federal Citrus Council) said at the present juncture it would inflict hardship on growers if the regulations were administered strictly.

Mr. Ranger (Q.) outlined the experience of growers in Queensland.

The motion was agreed to unanimously.

Mr. Such further moved—

> That urgent representations be made to the Federal Government with a view to securing the permanent prohibition of the importation of citrus fruits.

He said that Australia produced ample citrus fruits for its own consumption. American Oranges imported were purely luxury fruits, and the Australian Orange producers suffered by the importations. Australian Lemons were good enough for nine months of the year, Italian Lemons spoiling the market for the other three.

Mr. Parkes said that Australian Lemons were equal to the imported variety, and if the quality could be produced at the right time these could hold their own. Curing houses were being established at Doncaster in Victoria, and Lemons as good as any in the world were produced there.

The motion was carried unanimously.

Grape Industry.

Mr. Such introduced the subject of Federal regulations governing the export of Grapes.

Mr. Simper (W.A.) said that transport was the problem in his State. About 40,000 cases were exported from the State this season, and all were produced in a 10-mile square area in the Upper Swan district. The unlimited market for Grapes in the East should not be lost sight of. He moved:

> That a uniform sized case be adopted throughout the Commonwealth for packing Grapes for export.

In seconding, Mr. Wilmott stressed the advantage of the Western Australian package, which had uniform timbers.

Mr. C. W. Giles (South Australia) supported, and the resolution was unanimously carried.

Codlin Moth Control.

A review of codlin moth control methods followed.

Mr. J. M. Ward (Vic.) said that experiments in that State established the fact that spraying with arsenate of lead followed with an oil spray, had proved efficacious in dealing with the codlin moth pest.

Mr. P. H. Thomas (Tas.) said the same preparations had been found efficacious locally.

Mr. C. G. Savage (N.S.W.) said that good results were obtained in his State by the use of arsenate of lead spray mixed with oil. Experiments were proceeding.

An animated discussion followed, in which practical experiences were quoted.

Dressing Apple Cases.

Western Australian delegates objected strongly to the proposed alterations to the grading regulations calling for the ends of cases to be planed.

Tasmanian delegates spoke in accord with the Western Australian views. They were dissatisfied with the Federal Government in this matter.

Mr. Simper moved:

> That the Minister for Markets be asked to make no change in the existing regulations governing the ends of cases for export.

Mr. Wilmott (W.A.) seconded, and the motion was agreed to unanimously.

It was agreed that Messrs. A. Herring (N.S.W.) and W. Ranger (Q.) should be delegates to convey resolutions of the conference to the Government.

It was further agreed that the next conference be held in Brisbane in July, 1931. Mr. W. Ranger was elected President and Mr. R. E. Boardman (Vic.) re-elected Secretary.

A very hearty vote of thanks was carried to the President, and to the press.

The Conference on Its Social Side.

Pleasant outings were enjoyed by delegates and visitors. One delightful trip was by the river steamer to New Norfolk.

Another full day's trip was by motor charabancs to the Huon, via Ranelagh, to Huonville, visiting Port Cygnet, and returning via the Channel—Gordon, Middleton, Flowerpot, Woodbridge, Kettering, Snug, Kingston, and Brown's River.

On the Saturday evening there was a very enjoyable social.

Opportunity was taken by the delegates to also visit the springs, Mt. Wellington, Castle Forbes Bay, and the various beauty spots for which Hobart is justly famous.

There is no happiness in having and getting, but only in giving—half the world is on the wrong scent in the pursuit of happiness.—Henry Drummond.

Australian Fruit Exhibition

Success at Hobart.

High Quality Fruit Shown.

Mr. R. E. Fowler (Victoria) Wins the Championship Cup for Australia.

THE ALL-AUSTRALIAN FRUIT Exhibition at Hobart was a notable success. The huge wool showroom of Messrs. Webster's, covering more than an acre, was filled with representative collections of fruit from most parts of the Commonwealth. There were thronged attendances of fruitgrowers and the general public. Owing to the holding of the Australian Conference of Fruitgrowers at the same time, delegates were in attendance from every Australian State.

It is to the credit of a group of large-minded and far-seeing men in Tasmania that the show was made possible. Then when the project was launched on a comprehensive scale, members of the fruit trade here and abroad, nurserymen and others interested in the industry came forward and provided generous prizes, enabling the Committee to go ahead confidently in organising what proved to be the biggest fruit show yet held in the Commonwealth.

The showroom presented a pleasing picture. Round the sides were cases and trays containing the choicest fruit in Australia. In the central positions were charmingly arranged trophies of fresh fruit, canned and bottled fruit, and exhibits of farm produce. Of perpetual interest—and of great educational value—were the exhibits of tropical fruits from Queensland. With Bananas, Pineapples, and the various kinds of citrus, the public were, of course, quite familiar, but a mild sensation was caused by the Custard Apples, Monstera deliciosa, Papaws, Jack Fruit, etc.

Many folk tasted Custard Apples for the first time—and were delighted.

The dominating fruit at the show was the Apple. The principal prizes were for Apples. In Tasmania the principal primary industry is that of Apple production, while similarly as we examine the fruit industry statistics it is seen that the premier position is held by the Apple. There was a wide range of other fruits, the quality being very pleasing.

Another important feature was the emphasis laid upon packing, grading and labelling, this being evidence of a general determination to put up Australian fruit in the best manner possible.

Governor Opens the Show.

In introducing the Governor to open the show, the Chairman of the Show Committee (Hon. L. M. Shoobridge, M.L.C.), said he had performed a similar function at fruit exhibitions held in Hobart in 1914 and 1920. The present show excelled all others in that £1,100 had been provided for prizes. He was glad the Governor had recovered sufficiently from his illness to come and open the show.

The Governor of Tasmania (Sir James O'Grady) congratulated Victoria on winning the Colombie Cup. This had brought Tasmania to mother earth, but let the other States look out at the next exhibition! (Laughter.) There were faults in the Australian fruit export trade which should be rectified. Some of our advertisements in the shop windows of the Empire were very crude—and some of the worst were those relating to Tasmania.

Australians could learn a lot from America in the art of advertising. Organisation and co-operation were imperative for the effective development of the Australian fruit trade. The fruit industry could produce the goods, and markets could always be won by excellence in production and presentation in marketing.

"I honestly and conscientiously believe that we produce the best fruit in the world," continued the Governor, "and I appeal to you to rise to the occasion and help Australia to rise to her nationhood."

The Governor then congratulated the Show Committee and declared the show open. (Applause.)

The Awards.

The principal event of the show was the competition for the export grand championship of Australia for the best five cases of Apples, one each of different commercial varieties and sizes. First prize, the Colombie championship, valued at 40 guineas, champion certificate and blue ribbon, and 20 guineas in cash, donated by Mr. H. G. Colombie, Temple Court, Melbourne. Second prize, £15/15/-, grand certificate, and ribbon, donated by the Port Huon Fruitgrowers' Co-operative Association Ltd. Third prize, £10/10/- and certificate, donated by Messrs. Stokes and Hammond, Hobart.

The judges were Messrs. C. W. Giles (South Australia), C. G. Savage (New South Wales), J. H. Gregory (Queensland), P. H. Thomas (Tasmania), W. L. Gregory (Victoria).

The result of the competition was as follows:—

R. E. FOWLER, Pomonal (Vic.), 439½ points	1
BISDEE BROS., Bagdad (Tas.), 436½	2
BROADWATER ORCHARD CO., Stanthorpe (Q.), 432½	3
W. H. and D. F. Calvert, Ranelagh (Tas.), 429½	4
J. D. Grant, Tyabb (Vic.), 418	5
W. H. and D. F. Calvert, Ranelagh (Tas.), 429½	4
T. A. Frankcomb, Ranelagh (Tas.), 413	7
James Bulman, Legana (Tas.), 403½	8
W. J. Baily, Huonville (Tas.), 401	9
Batlow Packing House and Cool Stores, Batlow (N.S.W.), 385	10
W. C. Wright, Sidmouth (Tas.), 371	11
R. Purdon, Old Beach (Tas.), 326½	12

Mr. Fowler's winning exhibit included the varieties Jonathan, Fameuse (Lady in Snow), Stone Pippin, Dunn's and Cleopatra.

Messrs. Bisdee Bros., of Bagdad (Tas.), who were only three points below the winner, showed Sturmer, French Crab, Scarlet, Democrat (Tasma), and Cleo.

The third prize went to the Broadwater Orchard Co., Stanthorpe, Queensland, the varieties being Jonathan, Granny Smith, Dunn's, Delicious, and Stayman's Winesap. This exhibit was only four points below the second place honors. It is to the credit of the Broadwater Orchard Co. that their exhibit should have won third prize, as the fruit had been held in a butcher's cold store for two weeks before starting on its long journey to Hobart.

This championship competition formed the subject of a protest by Messrs. W. H. and D. F. Calvert, on the grounds that the third prize exhibit would not pass the inspectors for export. The matter was referred to the judges, who declined to re-judge the exhibits, stating that the fruit was fit for export when judged.

Trophies were awarded as follows:—C. J. Goodman Cup (all sorts of fresh fruit and fruit products, open to any individual growers), B. J. Pearsall (Kingston). A. J. Honey's Cup (tropical fruits), Committee of Direction of Fruit Marketing (Brisbane). Colonial Sugar Refining Co.'s Cup (citrus fruits), Committee of Direction, Brisbane. L. M. Shoobridge trophy (collection of farm and daily products), W. H. Fehlberg. Burton-Page Co.'s Cup (collection of dairy produce), R. O. Hazell. L. Susman & Co.'s Cup (collection of vegetables), N. H. Fehlberg. Colombie Cup (export Apples), R. E. Fowler (Victoria). Orient Line Cup (commercial varieties of Apples for export, 6 cases), W. H. Calvert. Barney Springer Cup (commercial varieties of export Apples, 4 cases), W. H. and D. F. Calvert. Port of Manchester Cup (Apples of different varieties prepared as if for export to Manchester), W. H. and D. F. Calvert. Dan Wuille trophy (Jonathan Apples prepared for export), J. Bulman. Sturmer Cup (Sturmer Pippins prepared for export), Bisdee Bros. Electrolytic Zinc Co.'s Cup (dessert and culinary Apples grown in Tasmania), J. Bulman. T.O.P. trophy (4 cases export Apples), W. H. and D. F. Calvert. F. A. Flint Pty. Ltd. Cup (Apples grown in Tasmania for export), J. W. Gould (Rostrevor Estate). Neptune Oil Co.'s Cup (commercial Apples for export), J. Bulman. Destruxol Corporation's Cup (collection of Apples raised in any State or New Zealand during recent years), J. Bulman. Vita-Lick Cup (Merino fleeces of wool), Ibbott and Muirhead (Apsley).

Other awards:—

District exhibit of fresh fruits and fruit products. First prize, £21, grand championship certificate, and blue ribbon: Kingborough Show Committee, Kingston, 1.

Exhibit of fresh fruit and fruit products, open to any individual grower. First prize, the C. J. Goodman's grand championship cup, valued at £10/10/-, grand champion certificate, and blue ribbon: B. J. Pearsall (Kingston), 1.

Exhibit of tropical fruits, including Pineapples, Bananas, Papaws, Granadillas, Mangoes, Monstera, Jackfruit, and others. First prize, championship cup, valued at £10/10/-, championship certificate, and blue ribbon: Committee of Direction of Fruit Marketing, Brisbane, 1.

Exhibit of citrus fruits. Championship cup, champion certificate, and blue ribbon: Committee of Direction of Fruit Marketing, Brisbane.

Exhibit of fruit preserves, Jones and Co. Pty. Ltd (Hobart), 1; Port Huon Fruitgrowers' Co-operative Association (Hobart), 2.

Exhibit of dried fruits and vegetables, Australian Dehydrated Products (Bridgewater, Tas.), 1. Collection of farm and dairy products, other than fruit, N. R. Fehlberg, 1. Collection dairy produce, R. O. Hazell, 1. Collection of vegetables, N. R. Fehlberg, 1.

Three cases of Apples, unwrapped, one each to be selected from Crofton, Delicious, King David, Rokewood, Statesman, and Tasma (Democrat), Jas. Bulman, 1; W. H. and D. F. Calvert, 2. Case dessert and case culinary Apples (unwrapped), W. H. and D. F. Calvert, 1; A. J. Fulton (Legana), 2; W. J. Baily (Huonville), 3. Four cases of Apples (unwrapped), to be selected from Alexander, Alfriston, Crow Egg, Hoover, Prince Alfred, Ribston, and Winter Majetin, Shoobridge Bros. (Derwent, Tas.), 1 and 2.

Tray Section.

Six trays commercial Apples of different varieties, suitable overseas export, Jas. Bulman, 1; Bisdee Bros., 2; J. R. McVilly (Cradoc), 3. Five trays Apples of five different varieties of Tasmanian origin, W. H. and D. F. Calvert, 1; B. J. Pearsall, 2. Four trays Apples, two dessert and two culinary, A. Gillow (Bagdad), 1; B. J. Pearsall, 2. Tray Alexanders, B. J. Pearsall. Tray Alfristons, B. J. Pearsall. Tray Cleopatras, J. R. McVilly, 1 and 2; W. Cooper (Berriedale), 3. Tray Cornish Aromatic, A. R. Cooper (Berriedale). Tray Cox's, B. J. Pearsall. Tray Croftons, Jas. Bulman, 1; J. R. McVilly, 2 and 3. Tray Delicious, Jas. Bulman. Tray Duke of Clarence, B. J. Pearsall. Tray Dunn's (Munroe), A. Gillow. Tray Fameuse (Lady-in-Snow), B. J. Pearsall. Tray French Crabs, Bisdee Bros., 1; A. Gillow, 2. Tray Gravensteins, B. J. Pearsall. Tray Granny Smith, Jas. Bulman, 1; J. R. McVilly, 2 and 3. Tray Jonathans, Jas. Bulman, 1; R. H. Wood (Sandford), 2; W. Cooper, 3. Tray Lalla, Frank Walker (Launceston). Tray Prince Alfred, A. R. Cooper. Tray Reinette de Canada (Blenheim Orange), B. J. Pearsall. Tray Ranelagh (Crofton), Jas. Bulman. Tray Scarlet Nonpareil, J. H. McVilly, 1; A. R. Cooper, 2; A. Gillow, 3. Tray Stone Pippin, B. J. Pearsall. Tray Sturmer, Jas. Bulman, 1; J. R. McVilly, 2 and 3. Tray Statesman, Jas. Bulman. Tray Stayman Winesap, Jas. Bulman, 1; H. C. Wright (Sidmouth), 2. Tray Tasma (Democrat), Jas. Bulman, 1; J. R. McVilly, 2 and 3. Tray Tasma's Pride, Jas. Bulman, 1; A. J. Tilyard (Sandford), 2; B. J. Pearsall, 3. Tray Worcester Pearmain, B. J. Pearsall. Tray any other variety, B. J. Pearsall.

Plate Section.

Collection of export Apples of 20 varieties, five specimens of each variety, Jas. Bulman, 1; W. H. and D. F. Calvert, 2; J. D. Grant (Tyabb, Victoria), 3. Collection of Apples, of eight varieties, four dessert and four culinary, five specimens each variety, Bisdee Bros., 1; J. D. Grant (Victoria), 2; W. H. and D. F. Calvert, 3. Collection Apples raised in any State or New Zealand during recent years, limited to new varieties raised from sports or seedlings, Jas. Bulman, 1; W. H. and D. F. Calvert, 2. Collection of commercial Apples suitable for export overseas, not to exceed 10 plates of different varieties, W. H. and D. F. Calvert, 1; Jas. Bulman, 2; Bisdee Bros., 3. Collection export Apples of six dessert varieties, one plate of each variety, W. H. and D. F. Calvert, 1; J. D. Grant, 2; Jas. Bulman, 3. Collection export Apples of six culinary varieties, one plate each variety, J. D. Grant, 1; W. H. and D. F. Calvert, 2. Adam's Pearmain, Bisdee Bros., 1; M. E. Large (Huonville), 2; Calvert and Tilyard (South Arm), 3. Alexanders, B. J. Pearsall. Alfristons, Bisdee Bros., 1 and 2; G. W. Schnell (Dover), 3. Cleopatras (N.Y.P.), M. E. Large (Huonville), 1; Calvert and Tilyard (South Arm), 2; Bisdee Bros., 3. Cornish Aromatic, E. Caponer (Snug), 1; W. A. Triffitt (Shipwrights Point), 2; F. T. Calvert (Glenorchy), 3. Cox's, Jas. Bulman, 1; H. L. Cato (Lenah Valley), 2; B. J. Pearsall, 3. Croftons, M. G. Large (Huonville), 1; Jas. Bulman, 2; Bisdee Bros., 3. Crow's Eggs, W. A. Triffitt. Delicious, W. J. Upchurch (Ranelagh), 1; Jas. Bulman, 2; F. T. Calvert, 3. Duke of Clarence, B. J. Pearsall. Dunn's (Munroe), Jas. Bulman, 1; Bisdee Bros., 2 and 3. Fameuse (Lady in Snow), A. E. Kimberley (Devonport), 1 and 2; B. J. Pearsall, 3. French Crabs, Mrs. H. N. Oldmeadow (Austins Ferry), 1; Bisdee Bros., 2 and 3. Geeveston Fanny, B. J. Pearsall, 1; J. W. Schnell (Dover), 2; Calvert and Tilyard (Sandford), 3. Gravenstein, B. J. Pearsall. Granny Smith, J. Bulman, 1; J. R. McVilly, 2 and 3. Hoover, M. G. Large. Jonathan, J. Bulman, 1; A. E. Kimberley, 2; F. T. Calvert, 3. King David, J. Bulman, 1; J. W. Schnell, 2. Lalla, Frank Walker (Launceston). London Pippin (Five Crown), L. N. Murdoch (Glenorchy), 1 and 2; A. E. Kimberley, 3. Prince Alfred, A. R. Cooper. Reinette de Canada (Blenheim Orange), B. J. Pearsall. Ribston Pippin, B. J. Pearsall, 1; W. A. Triffitt, 2. Rokewood, J. Bulman. Rome Beauty, A. E. Kimberley, 1; J. Bulman, 2; A. Gillow, 3.

Ranelagh (Crofton), J. Bulman. Scarlet Nonpareil, Bisdee Bros., 1; W. A. Triffitt, 2; J. R. McVilly, 3. Stone Pippin, B. J. Pearsall. Senator, F. T. Calvert. Sturmer, Bisdee Bros., 1; J. W. Schnell, 2; J. McVilly, 3. Statesman, F. T. Calvert, 1; A. E. Kimberley, 2; J. Bulman, 3. Stayman Winesap, J. Bulman, 1 and 2. Tasma (Democrat), J. McVilly, 1 and 3; F. T. Calvert, 2. Tasma's Pride, C. W. Peters (Lunawanna), 1; J. Bulman, 2; M. G. Large, 3. Worcester Pearmains, B. J. Pearsall. Yates, A. Gillow.

Tray Section.

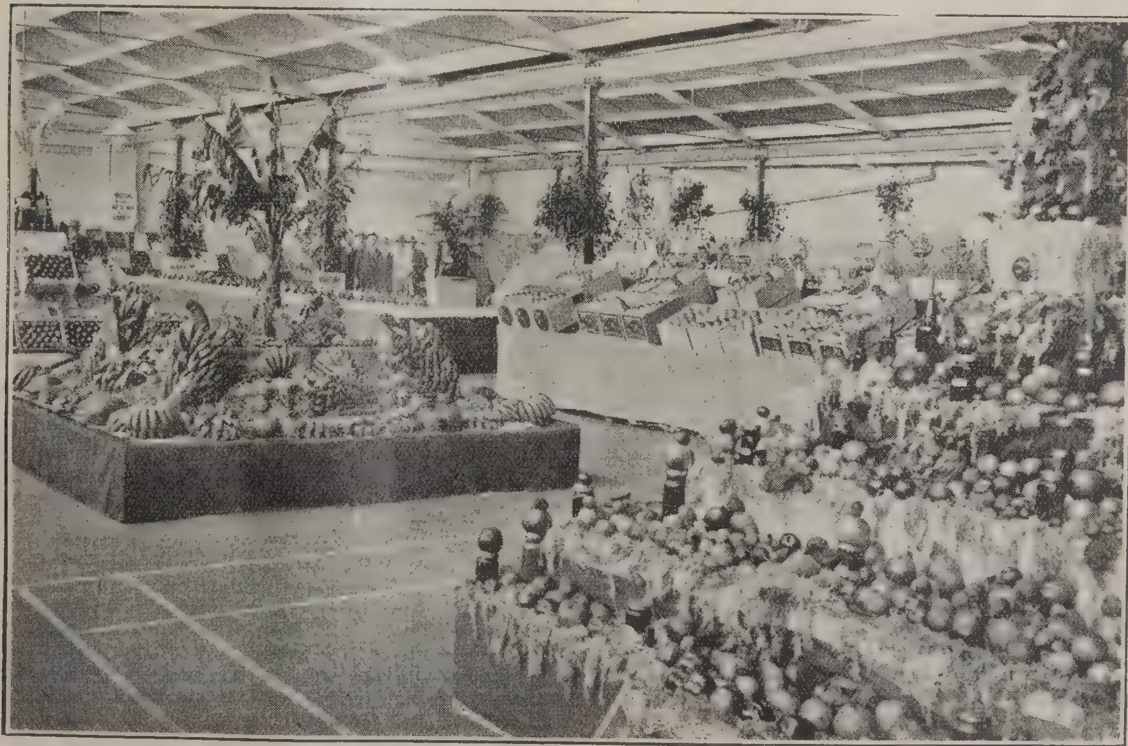
Six trays (commercial varieties), for export, one of each variety, J. Bulman, 1; W. H. and D. F. Calvert, 2. Four trays, any four export varieties, R. H. Wood (Sandford), 1; A. Gillow, 2; J. Bulman, 3. Two trays, one dessert, one culinary, open only to growers who have not won a first prize for Pears at any show, R. H. Wood. Beurre Bosc, J. Bulman, 1; R. H. Wood, 2. Beurre d'Anjou, R. H. Wood. Beurre Diel, W. L. Triffitt. Capiaumont. R. H. Wood. Doyenne du Comice, J. Bulman, 1; R. H. Wood, 2. Gansell's Bergamot, Calvert and Tliyard (South Arm),1; R. H. Wood, 2. Giblin's, R. H. Wood. Glou Morceau, J. Bulman, 1; R. H. Wood, 2. Josephine de Malines, A. Gillow, 1; J. Bulman, 2; R. H. Wood, 3. Keiffers, R. H. Wood, 1 and 2. Madame Cole, R. H. Wood, 1 and 2. Packham's Triumph, J. Bulman, 1 and 2. Vicar Winkfield, A. Gillow, 1; R. H. Wood, 2 and 3. Winter Nelis, Calvert and Tilyard, 1; R. H. Wood, 2; J. Bulman, 3. Winter Coles, R. H. Wood, 1 and 2; A. R. Cooper, 3. Any other variety, R. H. Wood, 1; A. R. Cooper, 2; J. Bulman, 3.

Plate Section.

Collection Pears, 12 different varieties, one plate of each variety, J. Bulman, 1; Calvert and Tilyard, 2; R. H. Wood, 3. Six plates (dessert varieties), one of each variety, Calvert and Tilyard, 1; H. L. Cato (Lenah Valley), 2; J. Bulman, 3. Four plates (culinary varieties), one of each variety, H. L. Cato. Two plates, one dessert, one culinary, open to growers who have not won a first prize for Pears at any show, K. L. Young (Denne's Point), 1; Calvert and Tilyard, 2; R. H. Wood, 3. Beurre Bosc, G. A. Magrath (Moonah), 1; Calvert and Tilyard, 2; H. I. Black (Lenah Valley), 3. Beurre Clairgeau, Calvert and Tilyard, 1; F. T. Calvert, 2. Beurre d'Anjou, Calvert and Tilyard, 1; J. Bulman, 2. Beurre Diel, Calvert and Tilyard, 1; H. L. Cato, 2. Capiaumont, J. Bulman. Doyenne du Comice, Jas. Bulman, 1; Calvert and Tilyard, 2. Gansell's Bergamot, J. Bulman, 1; Calvert and Tilyard, 2. Duchess d'Angouleme, R. H. Wood, 1 and 2. Giblin's, H. L. Cato, 1; Jas. Bulman, 2; Calvert and Tilyard, 3. Glou Morceau, Jas. Bulman, 1; K. L. Young (Denne's Point), 2; Calvert and Tilyard, 3. Josephine de Malines, F. T. Calvert, 1; A. Gillow, 2 and 3. Keiffers, Jas. Bulman, 1; H. N. Oldmeadow (Austin's Ferry), 2 and 3. L'Inconnue, Jas. Bulman, 1; H. L. Cato, 2. Madame Cole, R. H. Wood, 1 and 2. Vicar Winkfield (Napoleon), Mrs. H. N. Oldmeadow, 1; L. L. Young (Denne's Point), 2; Calvert and Tilyard, 3. Winter Coles, L. L. Young, 1; A. Gillow, 2; A. R. Cooper, 3. Winter Nelis, Jas. Bulman, 1; H. L. Cato, 2 and 3.

Other Classes.

Six cases commercial export Apples, one each of three dessert, and one each of three culinary Apples (unwrapped), W. H. Calvert and D. F. Calvert, 92 points and 82 points, 1 and 2; J. D. Grant (Tyabb, Vic.), 71 points, 3.



Section of the Australian Fruit Show at Hobart. The trophy of tropical fruits in centre of picture came from the Committee of Direction of Fruit Marketing, Brisbane. The winning five cases for the Australian Championship (Colombie Cup), shown by Mr. R. E. Fowler, Pomonal, Vic., can be seen at the extreme left of exhibits beyond the Queensland trophy.

Four cases export Apples, two wrapped and packed diagonally for export, and two unwrapped, W. H. and D. F. Calvert, 94 points, 1; James Bulman, 92 points, 2; A. R. Cooper, 90 points, 3.

Five cases of each of three of Sturmer, Cleopatra, Democrat, Jonathan, Scarlet Nonpareil, Rokewood, and Yates, grown in orchard from which at least 2,000 cases have been shipped to United Kingdom in any one of three years, 1927, 1928, and 1929, W. H. and D. F. Calvert, 93½ points and 91 points, 1 and 2; T. A. Frankcomb (Ranelagh), 85 points, 3.

Five cases of each of two of Alfristons, Dunn's, Stone Pippin, French Crabs, and Rome Beauty, W. H. and D. F. Calvert, 96½ points, 1; Bisdee Bros., 92½ points, 2.

Six cases of different varieties ready as if for export to Manchester, England, W. H. and D. F. Calvert, 97 points, 1; James Bulman, 89 points, 2; Rostrevor Estate, 85½ points, 3.

Four cases 2½in. export Jonathans, James Bulman, 87 points, 1; A. J. Fulton (Legana), 73 points, 2; P. Watson (Gordon), 66 points, 3.

Four cases 2½in. export Sturmers, Bisdee Bros., 1; G. McGowan (Scottsdale), 2; P. Watson, 3.

Case dessert and case culinary Apples, grown in Tasmania, James Bulman, 1; H. S. Wright (Sidmouth), 2; W. H. and D. F. Calvert, 3.

Four cases export Apples, one each to be selected from Cleo., Cox's, French Crab, Jonathan, Sturmer, Dunn's, Scarlet Nonpareil, and Granny Smith, W. H. and D. F. Calvert, 1; W. J. Baily (Huonville), 2; A. Gillow, 3.

Two cases export Apples, W. J. Baily, 1; H. C. Wright and W. H. and D. F. Calvert (equal), 2 and 3.

Two cases Apples grown in Tasmania for export overseas, Rostrevor Estate, 1; W. H. and D. F. Calvert, 2; B. Foster (Berriedale), 3.

Three cases Apples, one each of Cleo., Scarlet Nonpareil, and Sturmer, T. A. Frankcomb, 1; B. Foster, 2; A. Gillow, 3.

CITRUS FRUITS.

Case Section.

Case of Oranges and best case of Mandarins (all the exhibitors were from Queensland), W. Benham (Queensland), 1 and 2; N. C. Richards, 3. Case Lemons (Lisbon), W. Benham, 1 and 2. Case Mandarins (Emperor), N. C. Richards, 1. Case Mandarins (Beauty of Glen Retreat), W. Benham, 1 and 2. Case Mandarins (Scarlet), J. Richards, 1. Case Jaffa Oranges, J. Richards, 1; N. C. Richards, 2. Case Seville Oranges, J. Richards, 1. Case Siletta Oranges, W. Benham, 1 and 2. Case Washington Navel Oranges, W. Benham, 1 and 2. Case any other variety Oranges, W. Benham, 1 and 2.

Plate Section.

Plate Lemons (Lisbon), W. Benham (Queensland), 1 and 2; Luke Williams (Moonah, Tas.), 3. Plate any other variety Lemons, M. Cundy (Queensland), 1; Luke Williams (Moonah), 2. Collection four varieties Mandarins, N. C. Richards (Queensland), 1. Plate Mandarins (Beauty of Glen Retreat), W. Benham, 1 and 2. Plate Scarlet Mandarins, M. Cundy, 1. Plate any other variety Mandarins, W. Cundy, 1.

Collection Oranges, not less than four kinds, N. C. Richards, 1. Plate Oranges, any seedling variety, M. Cundy. Plate Siletta Oranges, W. Benham, 1 and 2; M. Cundy, 3. Plate Washington Navel Oranges, W. Benham, 1 and 2.

Tropical Fruits.

Bananas.—Cavendish, Lady's Finger, Gros Michael.

Pineapples.—Collection of different varieties, Ripley Queen, Rough Leaf, Smooth Leaf, Granadillas, Papaws, Custard Apples. All prizes were won by the Committee of Direction of Fruit Marketing, Brisbane.

Most useful article made from used Tasmanian Apple case, C. K. Weatherhead (Sandy Bay), 1 (piano stool); E. C. Dillon (Cygnet), 2.

Best design of fruit case label exhibited on Hall patent case, Bagdad Valley Fruitgrowers' Co-operative Co. Ltd., 1; Cleave Bros. (Victoria), 2; N. P. Bennett (Franklin), 3.

Window display of fruit in Hobart during week of exhibition, Arthur Dewhurst (95 Elizabeth-street), 1; S. G. Green (34 Elizabeth-street), 2; E. A. Coombe (19 Liverpool-street), 3.

Trade Exhibits.

There were several trade exhibits which added to the interest of the show. The Gerrard Wire Tying Machines Co. Pty. Ltd. had an attractive stand of educational interest, showing various packs for fruit. In addition to well-packed cases from various parts of Australia, there were also specimens of packed cases of Apples from New Zealand and the United States. The Australian pack suffered nothing by the comparison. The Apples were wrapper in neatly printed and colored tissue-paper and looked most attractive. Mr. D. P. Murray and Mr. W. L. Gregory were in attendance, much helpful information being given to growers. It is considered that this educational exhibit will have a far-reaching effect in inducing Tasmanian growers to adopt the standard Canadian case.

There was also an exhibit of labels from U.S.A., South Australia, Victoria and Tasmania. This attracted much interest, enabling growers to make comparisons, and to decide on their own labels.

Messrs. Wm. Cooper & Nephews had an attractive exhibit showing Arsinette, Alboleum and the other sprays handled by this firm. This exhibit was visited by many growers, and much helpful practical information was obtained. Mr. Harrowell and Mr. Small attended from Sydney.

The "Twin Screw" Fruit Grader was shown by Mr. C. Benjafield, Moonah, Tasmania. This grader is worked on a unique principle. At the first glance the machine looks like an elongated screw of large dimensions: it has a left and right hand thread: two grooves come together, forming a circle: these circles are in pairs 10 in. long. The fruit is gently passed along the "screw" until it finds its correct opening: fruit is graded on its cheek, thus a flat Apple goes through on its widest part, and an elongated type, such as Cleopatra, goes through on its narrowest, as it should, the diameter being the basis for deciding the sizes. The fruit can be graded in 8 sizes; falls gently on to spring bins ready for packing. Mr. Benjafield reports that this "Twin Screw" grader is selling well. Among others, the Tamar Valley Co-operative Co. have three in their packing house.

Messrs. Charles Davis Ltd., of Hobart, displayed the "Vacola" bottling outfit, orchardists and homestead requisites, etc.

The Quickook dehydrated fruits and vegetables attracted much favorable attention.

Messrs. Harrison, Marsh Ltd. displayed orchardists' and other equipment.

Fruit trees, Gooseberry bushes, Grape vines, etc., were included in the interesting exhibit of Mr. C. S. Wessing, nurseryman, Hobart.

The new Apple, "Lalla," was seen to advantage in an exhibit by Mr. Frank Walker, nurseryman and fruitgrower, Launceston. This Apple is similar to the Delicious in shape, but is of a glowing red color.

Hall's patent case was on view. This case has the centre slat thinner than the others to provide for ventilation.

Fruit labels were nicely displayed in the exhibit of Messrs. Troedel & Cooper, printers, Melbourne. Many interesting designs, well printed, were on view.

Apples Two Years in Cool Store.

An unusual exhibit was that of some trays of Democrat Apples grown by Mr. E. L. Ross, of Cambridge, Tasmania, which were placed in cool store on May 14, 1928. The Apples were glossy, firm and of good color, and were being returned to Messrs. Jones & Co.'s cool store to see how much longer they would keep.

* * *

The success of the show was due in a large measure to the enthusiasm and capable services of the President, Hon. L. M. Shoobridge, M.L.C., the General Secretary, Mr. A. J. Honey, and a Committee of willing helpers.

Central Stationary Spray Plant.

Overhead Spray System Successful in Tasmania.

THE OVERHEAD SPRAYING SYSTEM installed on the orchard of Mr. C. Kile at Castle Forbes Bay (on the Huon River), Tasmania, is of very great interest.

System.—Flow and return controlled by means of various gate valves.

Mr. Kile has 25 acres at present installed with this system. He states that he has reduced his time for actual spraying to less than half.

The appliances used are as follows:—

Two 140-gallon Vats.—Whilst they are spraying they are drawing their supplies from one vat, and a workman is getting the other vat ready for use.

Two Myers Double-action Pumps.—These pumps are drawing the spray from the vat and forcing it round the circuit of pipes at the pressure required by the operator. They can get pressures up to approximately 300 lbs.

Agitation.—There are two propellers in each vat. These propellers are driven from a small sprocket wheel fixed to the shaft of one of the pumps. A small chain drive is used.

Power.—A 5 horse-power electric motor works the whole system, the pumps being belt-driven from this motor.

Pressure Gauges and Pressure Cylinders.—Are placed or installed just above the pumps. This means that one person can operate the whole system at the supply end. All that is required in the orchard is the workman to do the spraying.

The piping used to carry the spray over the orchard is ¾-inch galvanised tested piping. This piping runs through the orchard at distances approximately 200 feet apart. The screw bibs, or hose ring taps, as they are commonly called, are placed approximately 200 feet apart on the rows of piping. These taps are ½-inch.

Hosing.—This is used in 120 feet lengths, and four lengths can be worked efficiently at one time off each run of piping.

The System in Operation.—Mr. Kile has the piping in the orchard run through the branches of the larger trees, the pipe being about 7 feet off the ground. Where the trees are younger and naturally smaller and lower in height, he has the piping carried overhead on long stakes. This means that the system does not interfere with the cultivation of the orchard, any vehicle being able to pass underneath the piping comfortably.

This system does not allow of any waste time. The men on the hoses are constantly employed spraying. There is no time lost through having to fill up the vat on the spraying outfit, having to go from one end of the orchard to the other for water, or on many other various jobs connected with a spraying outfit that is mobile.

The greatest benefit is said to be in the fact that the orchard can be sprayed at any time. There is no need to worry over what condition the ground is in from incessant rains. There are times when it is absolutely imperative that spraying should be done, but the work cannot be proceeded with owing to being unable to get the spraying outfit on the ground. With this system the foregoing difficulties are overcome. This system, which is installed over the 25 acres, has cost approximately £400.

One can easily follow the lead and return principle by studying the position of the gate valves and noting how it is possible to cut any run of pipe out, at the same time allowing the others to operate.

About 20 members and delegates from the mainland who were attending the Hobart Fruit Exhibition and Conference paid a surprise visit to Mr. Kile's place on Sunday morning, May 11, and very much appreciated Mr. Kile's kindness in showing them his system, also the generous manner in which he imparted information. They all came away satisfied they had gained a considerable amount of knowledge in the more modern methods of spraying.

Somewhat similar methods have been adopted in New Zealand and parts of America.

PEARS AND PLUMS.

London Shipments.

A report on Victorian Pears and Plums consigned on s.s. "Maloja" and s.s. "Baradine" has been received by the Assistant Minister of Agriculture, Mr. Pollard, from Mr. F. White, Victorian Trade Commissioner in London. In this report Mr. White states that there was a large amount of over-ripe and wasty Pears on the "Maloja." Quite a lot of cases on this boat were over-ripe and wasty —in fact, over 200 cases realised only 1/- per case. It would seem that some of these Williams Pears were getting ripe when shipped. With this delicate Pear it is a risk to ship any that are not green and hard, and any showing the slightest yellow tint when shipped ripen too quickly to reach the London market in good condition. The Pears ex s.s. "Maloja" were realising 10/- to 12/- per case, and the Plums 10/- to 14/- per half-case for sound fruit.

As an illustration of the slow demand for these Pears, it is pointed out that the fruit on the s.s. "Chitral" took twelve days to sell, and if the weather had set in warm some of the Pears would have ripened, and a much lower figure than 12/- would have had to be taken.

A few cases ex s.s. "Baradine" had been opened up, and some of them had been found frozen; some yellow, turning brown and showing waste; others hard, green and in good condition. A further report on these two boats will be forwarded in due course.

This season, Mr. White continues, South Africa is sending large quantities of Pears in the Oregon bushel cases, and these are realising about 13/- per case. He mentions that our long flat bushel case is not really liked on the market, buyers having a suspicion that it is only a three-quarter bushel case, and they much prefer the Oregon case.

Cherry Growing.

Need for Elimination of Small Varieties.

Discussing, in the current N.S.W. "Agricultural Gazette," the question of Cherry growing in the Young district, the departmental fruit inspector stationed in that centre draws attention to the fact that large areas have been planted with Cherry trees within the last few years, and the Cherry position is undergoing a complete change. Whereas in the past a payable price was realised for medium to small fruits, the experience of last season proved these to be almost if not wholly unprofitable. Many returns for medium to small fruit ranged from 6/- down to as low as 2/6 per 12 lb. box, while larger fruit ranged from 10/- to 7/- per box.

Most of the larger fruit for which the higher prices were obtained was produced on young trees just starting to crop, and should similar conditions prevail in coming years growers who have old trees bearing medium to small fruit will be hard put to obtain payable prices.

To better the quality of the fruit some form of pruning may have to be adopted, and perhaps it may also be necessary to manure the trees.

The pruning would lessen the quantity of fruit, but it would certainly add to the quality. This would mean less and consequently cheaper handling when marketing the crop.

Suitable Varieties.

Careful consideration should also be given to the question of suitable varieties. Such varieties as Werders', Californian Advance, and Burgdorf, which several years ago realised payable prices, are to-day worth very much less. Early Purple Guigne generally commands good prices for the first few consignments, but when the larger Burgdorfs come on to the market the Early Purple Guigne drops in price. The large Early Lyons overshadow the Burgdorfs, and the result is that many remain unpicked.

The planting of Lyons is somewhat overdone at Young; they are, moreover, a risky variety, being so easily spoilt by rain. This has occurred several times during the last few years.

Eagles' Seedling follows the Lyons, and early consignments have been successfully shipped, the Cherries being picked when turning pink, but while still firm. One week later, when more matured and softer, they have at times scarcely paid expenses. Florence follows Eagles' Seedling, and is generally in good demand for shipping. St. Margaret and Nobles are next to reach the market, and on account of their size and appearance always sell well. In latter years the Napoleon Bigarreau variety has been purchased by a Melbourne firm for crystallising, the price paid being 8/- per half-bushel case on rail at Young. This returns the grower about 5/6 per half-bushel, which is a payable price, as this variety is a heavy cropper, large trees producing up to ten half-bushel cases.

Summary.

In view of the foregoing, it would seem that the following points should be seriously considered:—

Large fruit only should be grown and the smaller varieties eliminated as much as possible.

Mid-season varieties such as Eagles should be marketed when firm so that they could then be shipped, thus relieving any congestion on the local market.

With this same idea in mind, when consideration is being given to further plantings, shipping varieties such as Florence, St. Margaret, and Noble should be kept in mind.

Should the offer from Melbourne for crystallising fruits hold good for a number of years, Bigarreau Napoleon would pay to grow.

Above all, small varieties must be eliminated, and to effect this in the case of varieties already planted, a system of pruning must be evolved to improve both size and quality, thus lessening the expenses in connection with picking, packing, and marketing.

The writer points out that the expenses of marketing (cost of box, picking, packing, freights, etc.), a 12 lb. box of Cherries is approximately 3/-, whereas perhaps thousands of cases sold at 4/- and less last season.

FRUIT CASE TIMBER.

Growers in S. Australia, N.S.W., and Victoria Desire Full Supplies of Softwood Cases.

The South Australian Fruit Marketing Association is very active on behalf of growers in that State. The fact that there is a similar organisation in Victoria is appreciated. The two Associations are able to compare notes and to effectively assist in the development of the industry.

At the recent Tariff Board Conference dealing with the timber industry, Melbourne, the Victorian Fruit Marketing Association, in order to have effective representation, telegraphed the South Australian Fruit Marketing Association, asking for authority to represent that Association. This authority was promptly given. The general opinion in South Australia is that every effort should be made to induce the Tariff Board to revert to the old duty of 6/- per 100 ft. super, it being considered that this duty should be sufficient protection to the local industry.

During the 1930 fruit export season shippers were compelled to use imported timber almost exclusively because of the unsatisfactory local timber which has been available in the past. It is doubted whether sufficient local timber is grown at the present time to meet the demand.

The increase of duty from 6/- to 14/- per 100ft. is, in the opinion of members of the South Australian Fruit Marketing Association, a very heavy and entirely unwarranted burden on the industry.

Australian Export Association.—The S.A. Fruit Marketing Association is keenly interested in the proposal to organise an Australian Apple and Pear Export Association. The idea is believed to be an excellent one.

* * *

The views of the Fruitgrowers' Federation of N.S.W. on the subject of case timber were recently expressed in a letter from the Secretary, M. E. E. Herrod, to the Secretary of the V.F.M.A., as follows:—

"Put briefly, our views are that the Tariff Board's previous recommendation should not be exceeded. In addition, the rebate on re-exported cases should be retained. Also, we would strongly resent any move to prohibit the importation of boards, for although we desire to support local industry, we consider that local timber is not suitable, and that suitable timber should be imported."

Thus happiness depends, as Nature shows,
Less on exterior things than most suppose.—Cowper.

* * *

Strive to realise a state of inward happiness, independent of circumstances.

Frost Fighting.

Success With Wood Fires.

REMEMBERING THE DAMAGE last season from frost, growers are now making earnest enquiries regarding frost fighting methods.

Last winter and spring severe frosts damaged citrus trees and fruit: deciduous trees suffered in the spring.

Success was obtained last spring by Mr. W. Eagle, Jun., of Harcourt, in the raising of the temperatures by wood fires and saving his Apple crop.

The wood was laid in every second row. The alternate row was left clear to enable spraying operations to proceed. A properly tested thermometer was installed, and when the temperature fell to 27 degrees Fahr., each second heap of wood was set fire to. This was at three o'clock in the morning. The temperature quickly rose to 31 degrees, and remained at that until 4.15 a.m., when it started to fall again.

The remaining fires were then lit, and the temperature remained at 31 degrees until sunrise, when the danger was past.

The pictures on this page show the fine crops which were harvested from the area which had been saved from frost damage. Surrounding orchards which had no heating methods suffered severely.

So satisfied is Mr. Eagle with his results that he is preparing to treat the whole orchard in the same manner this season.

FROST DETECTORS.

You Can Detect the Coming of Frosts Five Hours Ahead.

Of great interest to all branches of the fruit industry is that an instrument is available for predicting frosts. This is known as Sir Henry Cunningham's frost predictor.

The instrument is placed in the house or near the orchard: it records the amount of moisture in the atmosphere. When the air is very dry there is not much protection against heat radiation from the earth. When the wet bulb thermometer reads much lower than the dry bulb a frost may be expected. By an ingenious arrangement of two thermometers specially made for the purpose the requisite reading is given, indicating that the frost may be expected. By taking the reading in the evening it is possible to forecast a frost five hours ahead, and thus necessary precautions can be taken.

Messrs. T. Gaunt & Co. Pty. Ltd., 337 Bourke-street, Melbourne, are the representatives for Sir Henry Cunningham's frost predictor.

CALIFORNIAN PLANTINGS.

Deciduous Fruit Trees Increasing.

Tables published by "The Californian Grower" show a steady increase in the plantings of deciduous fruit trees since 1925. In the last five years the planted area of these trees has grown by over 135,000 acres. The biggest increases have been in Figs and Peaches (approximately 25,000 acres each) and Prune, 38,000 acres.

Scenes in the orchard of Mr. W. Eagle, Harcourt, showing spraying operations; also the heavy crops saved by frost protection methods.

THAT SUBSCRIPTION!

It's only a small matter, but the management of the "Fruit World" would take it kindly if renewal subscriptions would be promptly sent forward.

The "Fruit World" has a definite policy of service to the industry, and it helps us when the subscriptions come in promptly.

Simar Rototiller.—The Simar Rototiller has won appreciation in the several Australian States and New Zealand. The agents for N.S.W. are Messrs. Kent, Yates & Co., Daking House, 499 Pitt-street, Sydney.

Pumping Plants, Engines, Etc.—Messrs. Russell & Co., engineers, Box Hill, direct attention to the special services which they are offering in relation to machinery for orchards and farms. Full particulars are obtainable on request.

Australian Citrus Crops.

QUEENSLAND

Crop Estimated at 300,000 Bushels.

Interesting information regarding Queensland's 1930 citrus crop are to hand from Mr. Geo. Williams, Director of Fruit Culture, Brisbane, as follows:—

Owing to rather humid conditions the citrus crop has matured rather early this season, although the color of the fruit does not come up to the usual standard. This, in many cases, is being assisted by artificial coloring.

There is a superabundance of good fruit on the local markets, and large quantities have been railed to Melbourne, mainly from the Howard district.

Owing to various features and causes, different varieties are favored in different districts; in the Howard district Joppa finds most favor, also Emperor Mandarins.

On the Blackall Range, Navels, Joppa, Sabina and several Mandarins are most prominent, but the Emperor and Glen Retreat are rather subject to scab, which it is very difficult to control in the moist atmosphere. As has been previously noted, the Gayndah district provides the best citrus of all varieties, including Lemons.

Though difficult for growers to appreciate the fact, it is most obvious that citrus culture will in the future have to be centred much further inland than where subject to coastal influences. Heavy losses have been occasioned this year on both local and exported fruit on account of the presence of mould (i.e., from coastal areas).

Fruit from the Gayndah district has not shown any indication of its presence, but the fruit retains that brilliant color which invariably characterises the product from this district.

The fruit fly has been persistent, and heavy losses are reported from numerous orchards. The efficacy of fruit fly lure has previously been demonstrated, but its application has not become general, mainly in the hope that the fly will not be troublesome, and the cost of the lure or the trouble in applying it is not warranted.

While this apathy prevails it can only be expected that heavy losses in odd seasons will be experienced by its ravages.

Owing to the losses through mould and fruit fly, it is not expected that the yield will exceed 300,000 bushels. Last year drought conditions in several of the producing areas were responsible for an equal, if not slightly more depreciation.

Efforts are being made by the Department of Agriculture to have the varieties of Oranges grown or being planted very much reduced. At present most orchards contain too wide a selection. In round Oranges, Joppa, Washington Navel, Siletta and Byfield Seedless are recommended, and in Mandarins, Glen Retreat, Scarlet and Emperor, according to location or district.

CITRUS CROPS IN N.S.W.

Good rains benefited the coming citrus crops. The N.S.W. Department of Agriculture reports that seasonal conditions are generally favorable.

On the irrigation area the crop is expected to equal that of last year.

VICTORIAN CITRUS CROP.

The Victorian Government Citriculturist (Mr. S. A. Cock) reports as follows under date May 27:—

The citrus crop is a good one this season, and quite equal in quantity to the 1929-30 crop, also in quality. This applies to Navel Oranges, Valencia Late, and other seed types. Mandarins are equal in quantity to last season; also Grape Fruit (Pomelos).

Lemons are fairly good in quantity, and provided frost damage does not occur, the main crop should be equal to demand.

Fighting Insect Pests in the Orchard.

Peach Aphids.

Spray with lime sulphur or any of the white oils to destroy eggs. The eggs are usually found in clusters at the base of the leaves. They are bead-like, black in color.

Scales on Fruit Trees.

After pruning, spray with white oils.

Burn all prunings. When young scales are hatching, use nicotine sulphate or black-leaf 40.

Snout Moths (Pinara).

The caterpillars of this moth are grey in color and resemble the bark of the Apple and other fruit trees, making their detection difficult. When fully grown, they turn over a leaf and make a cocoon in it. The moth is yellowish brown. Use arsenate of lead, 1 in 25.

Plum and Cherry Tree Borer Moth.

The caterpillars of this moth seem to be spreading in orchards during the last few years, no doubt on account of their native food trees dying out in many localities. When these insects are noticed in trees, use bisulphide of carbon. Dip a piece of wadding or rag in the carbon and place same in tunnel, close over mouth of tunnel at once with clay or soap to prevent fumes from escaping.

Codlin Moth.

Examine bandages and crevices in trees, and destroy all larvae and pupae. Packing sheds and fruit cases should be examined for grubs. For further notes on codlin moth, see "The Fruit World," May 1, 1930.

Black Aphids of Citrus Trees.

These insects are exceedingly numerous at the present time, mostly on the young growths. They cause the tips to wither. Spray with nicotine sulphate or black-leaf 40, 1 oz. to 5 gallons of water, and a little soapy water to this.

Woolly Aphids.

The following is recommended as a winter spray:—Nicotine sulphate, 1 pint; red oil, 1 gallon.

To prepare sufficient mixture to treat 100 trees, 1 lb. soap should be boiled in a gallon of water, till dissolved, add a gallon red oil and mix thoroughly; then add one pint of nicotine sulphate, and after mixing the whole for a few minutes, add 80 gallons of water. If the water is hard, a small piece of washing soda should be added.

Happiness in this world, when it comes, comes incidentally. Make it the object of pursuit, and it leads us a wild goose chase and is never attained.—Hawthorne.

* * *

The happy people are those who have work which they love, and a hobby of a totally different kind which they love even better.

Strawberry Culture.

The Soil and Its Preparation—Planting and Cultivation—Manuring—Mulching—Varieties—Pest Control.

Interesting and Helpful Notes from Queensland.

The subjoined notes on Strawberry culture have been supplied by the Fruit Branch, Department of Agriculture and Stock, Queensland:—

ALTHOUGH THE STRAWBERRY is commonly considered to be better adapted to the climate of the temperate zones than to that of the semi-tropics, it is, nevertheless, the one berry fruit which can be grown to perfection in Queensland. Excellent fruit is produced in our southern coastal districts and even under tropical conditions such as those existing at Townsville, when the plants are grown on alluvial soil and are well irrigated, very good fruit is produced.

The commercial cultivation of the Strawberry is, however, confined mainly to those districts possessing a regular rainfall, and extends from the Redlands Area in the South to Bundaberg in the North. When grown under suitable conditions in this district, the Strawberry has proved itself to be an early and prolific bearer, able to stand a fair amount of hardship, in the shape of dry weather, and to resist the attack of insect and fungus pests to a greater or less extent.

There is a good demand for the fruit, either for immediate consumption in this and the Southern States or for conversion into jam, and, as few crops yield a quicker return, it frequently enables a beginner to make a living whilst more slowly maturing fruit crops are coming into bearing. Many a pioneer fruitgrower has to thank the Strawberry for his start, as it enabled him to make a living where he would, in all probability, have failed otherwise, and what applied in the case of our pioneers still holds good with the beginners of to-day.

Our Strawberries are of excellent quality and carry well, so that they reach their destination in the Southern States in good order when carefully handled and packed, provided the weather is not excessively warm or the fruit over soft on account of excessive rainfall. The fruit is very suitable for jam, and the product of some of our local factories is not excelled elsewhere in the Commonwealth; further, the demand for Strawberry jam exceeds the supply, so much so indeed that, for a considerable period of the year, it is not procurable. There is therefore room for the extension of the industry as the price realised for good Strawberry jam in the Commonwealth should enable both producers and manufacturers to obtain a satisfactory return.

Soils for Strawberries.

Given suitable climatic conditions, Strawberries will thrive in most soils, but the ideal soil for this fruit is a rich loam of medium texture, well supplied with humus, possessing perfect natural drainage, and capable of retaining moisture during dry spells—and the nearer one can get the soil to this ideal the better the results. Heavy, cold, badly-drained soils are not suitable, but any good loam or sandy loam, whether of scrub or forest origin, can be made to produce good berries if properly treated.

Preparation of the Soil.

There is only one way to prepare soil for Strawberry culture, and that is, **thoroughly**. Nothing else will do. In the case of virgin scrub or forest land, which is, as a rule, fairly rich in humus, the land, after it is cleared, should be broken up deeply and brought into a state of as nearly perfect tilth as possible. On virgin soil, except it is of the poorest nature, it is not necessary to apply any manure for the first crop, as there is usually an ample supply of available plant-food and humus present in such soil, but for subsequent crops, or old land, systematic manuring is very important.

Old land that is at all deficient in humus should have that deficiency made good, either by the application of a heavy dressing of farmyard or stable manure, such as a load to every 4 perches, or if this cannot be obtained, then by growing a green crop such as cowpeas or other legume which has been well manured with phosphatic and potassic manures and ploughing it in. The green crop so ploughed in should be allowed to rot, and, when rotten, the land should be re-ploughed and worked down fine. If the green crop has received a generous dressing of phosphatic and potassic manure, then there will be no need to apply any further fertilising material to the land, as a complete manuring has been given; but if not, then the soil should be treated as recommended later.

The surface of the land should be kept as even and level as possible, and, as already stated, it should be worked down fine, so that when the young plants are set out they will take hold of the soil at once and become firmly established.

Planting Strawberries on raw land, sour land, or land that has been indifferently prepared, is only courting failure, whereas, when the planting is carried out as advised, there is every chance of success.

Selection of Plants.

Always obtain strong runners from healthy, prolific plants. The first runners next to the parent plants are to be preferred, as they are usually the most vigorous and best rooted, and, further, they come into bearing earlier; but, failing these, any well-rooted, strong, well-grown runners can be used, and although they will not fruit as soon as the first runners they will give a good yield later on, and frequently continue to bear when the earlier fruiting plants have ceased.

Planting.

Having secured suitable plants, trim the straggling roots with a sharp knife; take care not to let them dry out. Careless planting is responsible for many failures, especially too deep planting, as no Strawberry will thrive if its crown is buried under the soil.

The distance at which to set out the plants varies somewhat in different districts, but it is not advisable in any case to overcrowd the plants, but to allow plenty of room. Personally, we favor planting strong plants at from 20 in. to 2 ft. apart each way, so that when planted the land can be worked all round the plant; or if row planting is desired, then the rows should be about 30 in. apart and plants set out from 15 to 18 in. apart in the row.

Cultivation.

Strawberry plants must only be surface-worked whilst growing or bearing fruit. The object is to keep down weed growth and to prevent the surface of the soil caking; but the cultivation must never be so deep that it will injure the roots.

Weed growth must be kept down and the surface of the soil must not be allowed to become hard and set, as if it does the evaporation of moisture from the soil will be greatly increased, and it will dry out rapidly.

If the plants are to be kept over for a second or third year, then the whole of the runners, other than those required to make good any losses in the original plants, must be removed, and the ground between the original plants must be well broken up and manured in late summer or early autumn, so that the plants will be in good nick for producing a crop of fruit the following season.

If the plants have been badly attacked by leaf blight it is a good plan to cut off all the leaves and burn them prior to working and manuring the land, as numerous fungus spores are destroyed thereby. The burning off is best done by scattering a little loose dry straw over the plants when the leaves have been cut off and have dried, and then setting fire to the lot. A light burning does not injure the plants, but is decidedly beneficial.

Mulching.

Mulching is seldom practised in this State, probably owing to the fact that a really good material for mulching is not readily obtainable, and therefore a light soil mulch produced by the surface working of the soil by means of a Dutch hoe or hand cultivator is all that is necessary. The use of a paper mulch has, however, much to recommend it, as it would certainly keep down weed growth and tend to maintain even soil conditions. A strip of paper mulch 18 inches wide would be all that is necessary, and the plants should be set through the paper at from 15 to 18 inches apart in the row. A further advantage to be derived by the use of paper mulch is that the fruit would be kept much cleaner, as it would not be so liable to be covered with dirt as frequently happens if heavy rain falls or the watering is not very carefully applied.

Irrigation.

Where water is obtainable it should always be available for the plants' use during dry weather, as the ability to maintain an adequate supply of moisture in the soil at all times and thus maintain an even growth will result in larger and better fruit, and a heavy increase in yield. Strawberries pay well for intensive culture, and the money expended in providing a good system of overhead or other method of spray irrigation will be found to be a very profitable investment. A combination of paper mulching and spray irrigation will enable a grower to maintain a regular supply throughout the season of first-class table fruit for which there is always a ready market.

Manuring.

The Strawberry is a fruit that requires an abundance of readily available plant-food, and one that pays well for systematic and judicious manuring. In the 1924 edition of his pamphlet, "Complete Fertilisers for Farm and Orchard," the Agricultural Chemist to this Department gives the following advice, which it will pay to follow:—

"Some of our coastal country, between the 26th and 28th degrees south latitude, is particularly suitable for Strawberry culture, frequently producing quite phenomenal crops. Some of our rich loamy soils found in our coastal scrub lands give the best results. In poorer sandy soils the improvement effected by artificial fertilisers, particularly such containing potash, is very marked, and a light dressing of 5 to 10 tons of stable manure per acre is very beneficial.

"A complete fertiliser for Strawberries of the formula 4-8-10 should be used at the rate of 5 to 9 cwt. per acre.

"The following fertiliser mixture may be found useful:—

Per acre:—

1 to 1½ cwt. sulphate of ammonia, or nitrate of soda;
3 to 5 cwt. basic or ordinary superphosphate;
1½ to 2 cwt. sulphate of potash;
or,
1½ to 2 cwt. nitrate of soda;
1 cwt. fine bonemeal;
4 cwt. superphosphate or Nauru phosphate;
2 cwt. sulphate of potash.

The latter, applied by two or three top-dressings, at the rate of 1 cwt. per acre, when fruit is first forming, and thereafter at intervals of two weeks."

Diseases.

The most serious diseases of the Strawberry in this State are those of fungus origin—viz., leaf blight and mildew.

The former can be controlled by the use of Bordeaux or Burgundy mixture applied as a spray, combined with the burning off of affected leaves, as previously mentioned; and the latter can be kept in check by means of precipitated sulphur applied with a light Feeney dust gun provided with an extended tube outlet. The ordinary sulphur generally used in dusting Grapes is not efficacious. Insect pests seldom do any very serious injury, but when leaf-eating beetles or other leaf-eating insects are present they can easily be destroyed by spraying with arsenate of lead; or in the case of cut-worms these insects can be kept in check by the use of poisoned baits.

Varieties.

Although most of the standard varieties of Strawberries have been grown in Queensland at one time or another, experience has shown that no one variety has proved permanent, but that it has been necessary to either raise new kinds from seed or to introduce them from elsewhere. Varieties producing perfect flowers have proved more profitable than pistillate sorts, and are therefore most commonly met with.

After being grown in this State for a few years, most varieties become weaker in growth, more liable to disease, and less prolific, so that they have to be discarded. The introduction of new sorts is thus essential, and there is no better way of doing this than by raising local seedlings. Some of the best sorts ever grown in the State have been locally raised seedlings, of which the Aurie, Anetta, and Phenomenal are good examples, and there is no reason why sorts equal or even superior to these should not be produced. Of the well-known standard varieties, such as Marguerite, Trollop's Victoria, British Queen, Pink's Prolific, Federation, Melba, and Edith, and several others that have been grown from time to time in this State, few are now planted. Phenomenal (a Gympie raised seedling) and Aurie, another variety of local origin, are now the varieties most commonly met with; other new varieties are being tested and some of them may prove to be adapted to our local conditions. The type of Strawberry best suited to this State is a vigorous healthy grower—that is, a good bearer and producer of good colored fruit of good, firm texture and fine flavor, a fruit that keeps and carries well, and that meets the requirements of both the fresh fruit trade and of the jam maker.

As Strawberry seed is freely produced and readily germinates, raising seedling plants, which usually fruit the following season, is recommended. By careful selection there is reasonable possibility of effecting improvement on existing varieties. Seed should not be collected indiscriminately, but from fruit freely produced on plants showing marked vigor.—"Queensland Agricultural Journal."

* * *

The infallible recipe for happiness is to do good.—Henry Drummond.

Victorian Fruit and Flower Show.

Successful Event at Melbourne Town Hall.

High Quality Fruit Displayed.

SUCCESS ATTENDED the Fruit and Flower Show in the Melbourne Town Hall on April 29 and 30, under the auspices of the Royal Horticultural Society and the Fruitgrowers' Cool Stores Association. The Show was officially opened by His Excellency the Governor, Lord Somers.

It is some years since a fruit show has been held in Melbourne: the experience gained on the present occasion will be useful in making the event an annual one.

The floral display was very charming, Chrysanthemums, Roses and Gladioli predominating. The Town Hall was a veritable bower of beauty.

The fruit was of very high quality. Independent press comments were to the effect that the fruit display was one of the finest seen in Melbourne for many years.

In the section for four cases of Apples wrapped and packed for export, the competition was very keen. The first prize was won by W. M. & B. C. Black, of Pakenham, with Miss Rose Dennett, Somerville, second, and A. P. Webster, Pakenham, third.

In the competition for the best case of Apples to be sent to His Majesty the King, the successful exhibitor was Miss Rose Dennett, of Somerville. The Apples were of the Jonathan variety, and were of perfect quality and highly colored. This carried a prize of £5/5/-, presented by the Victorian Fruit Marketing Association.

Prize case of Apples sent to His Majesty the King—Mr. A. E. Dennett, the grower, is seen holding the championship ribbon.

This entry created much interest amongst growers, and the public. Lord Somers, in opening the show, said he was sure His Majesty would be pleased with the gift and that the Apples would be enjoyed in the Royal household.

Arrangements for despatching the Apples to His Majesty were courteously taken in hand by the Gerrard Wire Tying Machines Pty. Ltd., and Messrs. Parnham Pty. Ltd.

In the tray section the fruit showed up very nicely. There was some criticism because of the Apples being polished; on the other hand it was pointed out that the Show Committee, in permitting the Apples to be polished, had in mind the removal of the spray marks and dust, giving the fruit a bright shiny appearance.

The prize for six trays Apples, was won by the Two Bays Nurseries and Orchards Co.

For six trays Pears, the Orchardists' Cool Stores Association, Doncaster, was successful. In the dish section, Jonathans predominated, and Mr. A. C. Chandler won many prizes.

Other prize-winners in the fruit section included W. J. Williamson (Portland), W. Mock (East Burwood), L. Warren, W. F. Boe (Tyabb), Tainton & Sons, W. H. Shiele, and "Fireside" Fruits Co., W. J. P. Howie, Portland Cool Stores, C. Karl, J. Smedley, S. S. Schreuder, C. Kleine (Red Hill), and others.

The Victorian Dried Fruits Board and the Victorian Railways Department put up a particularly attractive exhibit. The framework was festooned with Grape vine arms and leaves. Sultanas, Currants and Lexias were shown. Recipe books showing the uses of dried fruits were distributed, and facilities were provided for the public to purchase the fruits in cartons. The neatness of the exhibit and its general atmosphere of service were greatly appreciated by the public.

Much credit is due to the Emily McPherson College of Domestic Economy for their special services, under the capable direction of the Principal, Miss Chisholm and staff. Their table of cookery showing methods of using fruit products, was greatly admired. Members of the staff judged the exhibits of cookery sent in by the general public. Then, on the second day of the show a cookery demonstration showing how to use fruits, was given at the College, several hundred women attended and expressed keen appreciation. Booklets giving Apple recipes were distributed.

Another interesting feature was the Raisin Cookery Competition conducted by the Master Pastrycooks' Association. The varieties of cookies which could be made, using Raisins, came as a surprise. A special section was included for Raisin pies, and it is hoped that as a result of the effort there will be a bigger demand for Raisin pies.

During the progress of the Show, lectures were given by Mr. J. M. Ward (Superintendent of Horticulture), on "Spraying Methods"; Mr. R. Lee, on "Chrysanthemums"; Mr. E. E. Pescott, F.L.S., on "Vegetable Culture"; Dr. Geo. E. Payne Philpots, on "Fruit and Health."

Through the courtesy of W. C. Thomas & Sons, Tynong, and J. J. Tully, Doncaster, in supplying several cases of Apples, it was possible to give an Apple to every child attending the Show.

Suspended from the balcony was a prominent sign: "Nature's Best Toothbrush—the Apple."

Thousands of Apple recipe booklets were distributed to the general public.

Trade Exhibits.

Messrs. Pannifex & Co., Market-street, Melbourne, made a feature of their "Volck" spray—a white oil for summer spraying. Choice Apples were displayed from orchards where "Volck" had been successfully used.

The T. H. Brunn Garden Service Pty. Ltd. exhibited Vio-Ray glass fabric—an unbreakable fabric substitute for glass, for gardeners, poultry-keepers, fruit houses, etc.

The Austral Rotary Cultivator Co. displayed their patent implement—a new principle for cultivating vineyards, orchards and citrus groves.

The Gerrard Wire Tying Machines Co. had an interesting exhibit revealing the various packs of fruit possible in the Canadian standard case. American and New Zealand packs were shown by comparison. This stand was of educational value and attracted numerous visitors.

The Shell Co. of Australia featured their oils for spraying purposes as well as their oils for general purposes. The exhibit was very tastefully arranged.

The Ormond Plant Farm, in addition to their attractive floral display, showed the "Destruxol" spray (insecticide and fungicide) and the Phoenix rain machine.

Messrs. Fowler's Pty. Ltd. displayed their appreciated "Vacola" fruit bottling outfits.

The Gay sprinkler was exhibited. This system of overhead irrigation is appreciated by citrus and other fruitgrowers. Information was given by the inventor, Mr. E. C. Brickhill. Also shown at this stand were the useful "Rolcut" secateurs and "Clensel" spray.

"Windolite" glass substitute fabric was shown by C. H. Leaver & Co., Melbourne.

The exhibit of Alex. Sturrock & Sons, S. Melbourne, consisted of fruit cases for all branches of the industry—Apple and citrus boxes, Grape cases, and boxes for canned and dried fruits.

The Department of Agriculture and Mr. F. D. Castella, Government Viticulturist, put up a most interesting display of Grapes from the Rutherglen Viticultural Station. The display was entirely arranged by Mr. G. B. Tindale.

Over 100 varieties of Grapes were shown, including table, wine and drying varieties. Among the varieties noted were Gordo Blanco, Purple Cornishon, Barbarossa, Belino Black, Shiraz, etc.

At the conclusion of the show many exhibitors gave permission for their fruit to be sent to the Children's Hospital. This was done, and the Secretary of the Fruit Section of the show (Mr. R. E. Boardman) received a letter from the Secretary of the hospital, asking the donors to accept best thanks for the appreciated gifts.

The Fruitgrowers' Cool Stores Association is to be congratulated on its enterprise in arranging for this important fruit section in conjunction with the Royal Horticultural Society's Show. It is certain that only good can come from the effort.

Victorian Fruit Marketing Association.

THE monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at Temple Court, Melbourne, on May 23. There were present Messrs. E. I. Lawford, Vice-President (in the chair), W. A. Webb, W. H. Carne, R. E. Fowler, K. Eagle, H. Ford, J. W. Bailey, F. R. Mellor, J. Barker, F. Cave. An apology was received from Mr. J. B. Mills.

Mr. J. W. Bailey wrote, stating that as it was the unanimous wish of the Committee that he continue as an Executive member, he had decided to withdraw his resignation. Letter received. The Chairman congratulated Mr. Bailey on his decision.

The Humber Fruit Brokers Ltd., Hull, England, wrote, offering their services. Decided to send copy to shipper members.

Freight on Softwood Cases.—The Railway Department wrote, stating that the matter of reduction on the freight of softwood cases was receiving consideration.

Export of Pears.—The Overseas Shipping Representatives' Association wrote, acknowledging request for additional shipping space for Pears and stating that the request had been placed before the various shipping companies. Letter received. It was reported some additional space for Pears had been made available.

Softwood Cases.—A cable was received, dated May 7, from the London Fruit Exchange, as follows:—"Understand traders' opinion desired regarding Canadian case. Meeting brokers, London Fruit Exchange, to-day confirms opinion expressed National Federation, October, 1929, favoring softwood against hardwood; general opinion now traders prefer Canadian instead of dump. Morgan, Secretary."

The Secretary reported having been in touch with the Secretary of the Tariff Board regarding representation at the conference to consider milling interests and the fruit case question. In response to a telegram the S.A. Fruit Marketing Association authorised the V.F.M.A. to represent them at this conference. At the request of the Executive, Mr. F. R. Mellor kindly agreed to represent these Associations at the conference. The Chairman then requested Mr. Mellor to present his report.

Mr. Mellor reported that in addition to the recent increase in duty, there was a strong demand for the prohibition of the importation of softwood shooks. Tasmanian hardwood milling interests desired the embargo. He was able to present a complete, and, he thought, convincing case, to the Tariff Board Conference, regarding the necessity for the softwood case for the fruit industry. Technical information had been given at some length, and he had been subjected to cross-examination. A summary of the request on behalf of the fruit industry to the Tariff Board Conference was as follows:—

1. That no embargo be placed on the importation of softwood shooks.
2. That the duty on case shooks be reduced to the old rates of 5/- and 6/- per 100 ft. super.
3. That all case shooks be allowed entry under item 404 10 per cent. ad valorem, under guarantee of export.
4. That timber in suitable sizes for cases be allowed entry under present conditions.

In the discussion that followed delegates dealt with the unfavorable nature of the hardwood case.

Mr. Fowler stated that he saw in Tasmania recently seasoned hardwood cases which were much inferior to softwoods. Irregular thickness of the timber in hardwood cases caused the Apples to be cut and damaged. It was certain that the softwood case was necessary for the industry.

On the motion of Messrs. Webb and Cave, Mr. Mellor's report was received, and he was thanked for his attention.

Australian Fruit Show, Hobart.—Mr. R. E. Fowler was congratulated by the Chairman on having the Australian Championship Cup. (Applause.)

Australian Fruitgrowers' Conference.—The Secretary reported the Conference was entirely successful, delegates attended from every Australian State, and much good work had been done. Mr. J. B. Mills unfortunately could not attend because of illness, and Mr. R. E. Fowler had been appointed in his place. The decisions of the V.F.M.A. regarding items on the agenda paper had been endorsed by the Australian Conference. These included:—No alteration to the present fruit export grading regulations; reduction of varieties for export should be by education, not legislation; British preference on Empire fruit approved, also reduction of German tariff. Conference adopted resolution favoring the appointment of trade representative in the East (the Commonwealth Government representative stated it was expected an appointment would shortly be made). Resolutions had also been carried in favor of experimental orchards, research work and a plant quarantine station. Conference had requested reduction in the duty on softwood cases and had requested the Federal Government to ensure that fruitgrowers should receive adequate supplies of softwood cases.

On the sugar question, a resolution had been carried requesting a conference with sugar interests to reconcile conflicting viewpoints. Much helpful information had been given regarding fruitgrowers' organisations in the several States, also practical experiences in codlin moth control. An Australian Fruitgrowers' Federation was desired.

Regarding citrus fruits, the Conference requested the State Government to re-cast the standards regarding immature and dry Oranges. Further, that there be total prohibition of imported citrus fruits. For the export of Grapes, the case used in Western Australia was asked to be made uniform for the rest of Australia.

Mr. R. E. Fowler said that the Conference from a business and social aspect was entirely successful. While the ideal had been expressed for bringing Australian fruit export grading regulations into line with the world's standards, it seemed unwise to disturb the present regulations just now, especially as growers were becoming educated as to what was required for "special," "standard," and "plain." On the sugar question, Mr. Boardmad had acquitted himself well.

Mr. C. M. Griffeth said that the information gained at the Conference was of great value. The Australian Conferences should be continued. The desire had been expressed for the strengthening of the present organisation; there were many points of contact between the Apple, citrus, dried fruits, and other sections of the industry, regarding tariff, containers, etc., on which united voice was desirable.

The delegates were thanked for their reports, and it was decided, on the motion of Messrs. Webb and Cave, to request Mr. Fowler, Mr. Griffeth and the Secretary to act as a sub-committee to draft a preliminary constitution for the suggested Australian organisation.

Mr. J. W. Bailey said it was one thing for a conference to pass resolutions, but he believed that more good would be done when the Government granted the industry power by legislation to effectively organise. When recently visiting a ship's hold during loading operations he saw laborers walking heavily over stacks of fruit (in softwood cases). This should not be permitted.

Mr. J. W. Barker stated that there had been a great improvement in the loading of fruit shipments this season. The Fruit Exporters' Handling Committee had a representative on duty to supervise loading, and wherever he found holds being loaded without the workmen using walking plants, loading operations were stopped until the planks were provided. The fruit shippers had had the co-operation of the stevedores and the shipping companies.

Mr. Cave, in support, said that any defects in loading operations were remedied immediately they were reported. If a Government inspector were available to inspect loading operations in the hold with authority to insist on careful stowage, very much good would result. He agreed that there had been a wonderful improvement in the stowage this season. Much of the advantage of the Canadian case, however, would be lost unless same were stacked on ends. A uniform case was necessary. He moved that a letter be sent to the Minister for Agriculture requesting that inspectors be made available for attendance in the holds of steamers whilst export fruit is being stowed.

Two inspectors would be necessary, one for Victoria Dock and one for Port Melbourne. Their duty would be to see that the fruit was handled as carefully as possible. Good results would be secured by tact. Mr. Carne seconded the motion, which was carried.

Victorian Fruitgrowers' Conference.—The Secretary suggested that the V.F.M.A. call a general fruitgrowers' conference to be held either in a country centre or at Melbourne. That after the V.F.M.A. business had been dealt with the conference be thrown open to deal with general matters affecting the industry. Decided, on the motion of Messrs. Griffeth and Carne, to bring this matter up for discussion at a later date.

Pear Export.—Mr. Eagle asked for details regarding the activities of the Pear Export Committee, particularly in view of the fact that growers from Harcourt had sent Pears for export without the Pears having been pre-cooled. Further, that even with Pears which had been in cool store, there was no guarantee to check as to the length of storage time before railing for export.

In reply, it was pointed out that no Pears would knowingly be accepted for export unless same had been pre-cooled. The inspector at Harcourt should have rejected the pears on the Harcourt station. Even after slipping past the inspectors the ship's engineers had the right to refuse to load Pears which had not been pre-cooled. It was asked that in future any such instances be promptly reported.

Decided, on the motion of Messrs. Griffeth and Webb, to write to the Department of Agriculture, stating that un-precooled Pears had been sent from Harcourt this season, and requesting that extra precautions be taken to see that there was no repetition.

It was further decided to hold a meeting of the Pear Committee on the date of the next meeting, Friday, June 20, at 11 a.m.

Fruit Industry Luncheon.—Decided to hold a luncheon on the date of the next meeting, June 20. Mr. J. B. Mills to be asked to give an address on some national aspects of the fruit industry.

The more we limit and concentrate happiness, the more certain we are of securing it.

* * *

The greatest happiness comes from the greatest activity.

Vineyard and Dried Fruit Notes.

CULTIVATION OF THE VINEYARD.

Time for the Winter Ploughing.

VITICULTURISTS MAY BE REMINDED of the importance of making an early start with the winter ploughing.

All the operations pertaining to the working of a vineyard throughout the summer have a tendency towards the consolidation of the soil immediately below the surface. This is accentuated, states the N.S.W. Department of Agriculture, by early autumn rains and by the growth of weeds incidental to such rains. In such a condition, accumulated water is quickly shed from the surface, and more particularly so if the land has any appreciable fall. Winter cultivation aims at enabling the land to absorb moisture and preventing "run-off," and a broken, loose condition is therefore produced. Naturally, the rougher and more open the surface, the more easily does the water find lodgment, and the more certainly reach the subsoil. In the early winter cultivation, destruction of weeds is purely secondary, although it is very largely effected.

Under normal circumstances, the earlier the winter ploughing can be started the better. In most viticultural districts the conditions generally admit of the ploughs being started in May, all that is required being sufficient rain to moisten the soil, in order that the ploughs may readily break it up. Where small areas are concerned it is a simple matter, but with large vineyards the work has to be started early in order that it may be completed in good time.

The nature of the soil has to be considered, and the ploughing so arranged that the most difficult portions are completed first. Heavy soils should, in most cases, be completed before they become too wet, while lighter ones may safely be left until later, as they may be ploughed at almost any time.

The system of ploughing varies in different districts, and according to local custom, but it should be accepted as an axiom that the lower the average rainfall the greater the care that should be put into cultivation. Efficient work aims at complete turning of every portion of the surface at least twice a year.

The system generally recommended is as follows:—So soon as the land is in a fit condition for ploughing during the month of May or early in June, plough to a depth of 6 inches away from the vines, throwing the sod towards the centre of the row, keeping the crown as low as possible, and turning subsequent furrows over, until vines are reached upon either side. The strip of soil left unploughed underneath the crown will be worked during the second ploughing. It is not always advisable to plough deeply right up to the vines, owing to the possibility of severing important roots or even pulling the vine out of position. It is preferable to turn the last furrows with a lighter finishing plough. Implements are obtainable that are so constructed that the body is set over from the beam, which is at the same time movable and can be set right out to allow the horse to walk wide of the row. In this way there is very little left unploughed—simply a small strip against the vines, which is easily treated by means of a hoe.

For the **ploughing of large areas** ploughs can be procured up to size of four furrows, and which can be adjusted for finishing off close to the vines, and again readjusted for the second or throwing-on ploughing, thereby doing away with single-furrow work. The hoeing operation may be accomplished by hand, or by a specially constructed implement known as the "vine hoe," which carries a hoe or blade out upon an arm so that when guided by the steering disc on the near side, it can be worked around the stems of the vines with ease, turning one-half of the unploughed strip on either side.

When the whole work has been completed the soil is high in the middle of the rows, while the vines stand in the depression and are therefore more likely to get the benefit of any rain that falls. The uneven and rough surface meets, in an ideal manner, the requirements mentioned above.

The soil is permitted to remain in this condition throughout the winter and harrowed prior to the second ploughing to facilitate the operation, and left until such a time as it may be desirable to push on with the further cultivation. Pruning and other work will be completed in the meantime.

SULTANA PRICES REDUCED.

The A.D.F.A. Commonwealth price of 1-crown and "plain" Sultanas has been reduced ½d. and 1d. per lb. respectively, making new prices as under:—

	10-tons per lb.	100-boxes per lb.	1-box per lb.
1-crown	6d.	6⅛d.	6¼d.
"Plain"	5d.	5⅛d.	5¼d.

The above prices are for Adelaide, Melbourne and producing centres in Victoria and South Australia, also Fremantle, Perth and Albany, for Sultanas produced in Western Australia, plus the usual additions to other ports, as per terms and conditions of sale.

The above prices are for delivery from May 16 to June 25, 1930, only.

FRUIT WORKERS' WAGES.

The quarterly adjustment of S.A. fruit workers on the River Murray settlements, shows a drop of 4/- from May 3, according to the Government Statistician's cost of living figures. This makes the rate for adult males £4/4/-, and adult females (of 18 years or more) £2/16/-.

DEPARTMENT OF AGRICULTURE, VICTORIA.

Planting and Reconstitution of Vineyards.

Intending planters of vines are reminded that applications should now be made to the Department of Agriculture for resistant vine stocks grafted and ungrafted.

Applications for grafted rootlings for delivery during the 1931 planting season will be received until June 15, 1930.

Applications for ungrafted rootlings for delivery this coming (1930) planting season will be received until June 30.

Prices continue the same as last year, viz:—

Resistant rootlings, grafted with scions previously supplied by applicants, at per 1,000—£12.
Resistant rootlings, ungrafted, at per 1,000—£3.
Resistant cuttings, at per 1,000—£1/10/-.

Conditions and application forms will be posted on application to Mr. J. M. Ward, Superintendent of Horticulture, 605 Flinders-street, Melbourne, C.3., or to the Manager, Viticultural Station, Rutherglen, Vic.

AUSTRALIAN DRIED FRUIT.

Oversea Sales.

The Commonwealth Dried Fruits Export Control Board reports that 861 tons Australian fruit were sold in Great Britain during the week ending May 15, representing in value £32,184. Sales include 716 tons old season's Sultanas, averaging £35/4/6, and 145 tons new season's Currants at an average of £47/18/8.

Shipments of new season's fruit total 16,360 tons, as compared with 19,308 tons at the same date last year.

It is now anticipated that the harvest for 1930 will produce from 57,500 to 60,000 tons, of which probably 45,000 to 47,500 tons will be exported, and that approximately 40,000 tons will be shipped to British ports.

Approximately 2,500 tons new season's fruit have already been sold to Canada, and 800 tons to New Zealand, according to latest advices received by the Control Board.

RED CLIFFS.

During the season 4,961 tons of dried fruits have been consigned from Red Cliffs, as compared with 6,448 tons last year (reports "Sunraysia Daily" on May 22). These figures are due to the late season.

Grapes.—Up to the present Walthams and Ohanez have been the chief Grapes exported. So far there have been 54,389 cases consigned from Red Cliffs, as compared with 53,679 cases last season.

Citrus.—There is a heavy citrus crop, but owing to the heavy Apple crop with its reaction on the citrus market, prices are not expected to reach or exceed those of last year. £1 a case was obtained by a Red Cliffs grower for a small consignment of Oranges recently.

CALIFORNIA CANNED FRUIT PACK.

The California Fruit Canners' League recently announced that the State fruit pack last year totalled 15,585,734 cases, compared with 20,223,024 cases in 1928. The State vegetable pack totalled 13,260,896 cases, as against 10,474,366 cases the previous year.

The fruit pack decrease was due to heavy frost damage to cling Peaches in the spring of 1929. Cling Peaches decreased to 7,972,086 cases from 14,811,606 in 1028. The heaviest increase in the fruit pack was in Apricots, which totalled 4,211,471 cases, a record for recent years, as against 2,097,070 cases in 1928. Among vegetables, Spinach made the greatest increase, totalling 4,193,742 cases, compared with 2,904,543 cases the previous year. —"Better Fruit."

CANNED FRUITS INDUSTRY.

So large are the packs of canned fruits now put up in Australia that it is reliably estimated the export proportion is 75 per cent.

The canners have approached the Federal Government with a request for assurance that the canners will not be forced to sell below cost of production. It is understood the Government is favorably considering a bounty to the extent of about £10,000.

CANNED FRUITS—1930 SEASON'S EXPORTS.

The Canned Fruit Export Control Board advises that the exports of canned fruits to various destinations from the commencement of the season to April 30, 1930, were as follows—

Destination.	Apricots. doz. 30oz.	Peaches. doz. 30oz.	Pears. doz. 30oz.	Totals. doz. 30oz.
United Kingdom	43,490	83,542	39,660	166,692
New Zealand ..	5,472	17,206	185	22,863
The East	597	1,492	1,530	3,619
Canada	5,333	21,342	2,219	28,894
Miscellaneous ..	224	311	1,059	1,594
Totals	55,116	123,893	44,653	223,662

NEW SOUTH WALES.

CONFERENCES of District Councils of the N.S.W. Fruitgrowers' Federation were held during May.

The Metropolitan Branch desired that all fruit artificially coloured be labelled as such: that foreign citrus be permanently prohibited, and that Tomatoes be brought under the grading regulations.

Mr. T. A. Tester presided at the Conference of Southern District Branches. It was decided to request that the Apple and Pear export grading regulations be brought into line with the world's standards: that compulsory bandaging for codlin moth be dispensed with: that in loading fruit into ships' holds it be made a penal offence to walk over fruit cases without protective planking; that the Railway Commissioners exercise stricter supervision to avoid rough handling, and that in view of the lighter cases now adopted a flat freight rate of 45 cases be adopted instead of 40 cases as at present.

At Gosford, the annual Conference of the Central Coast District Branches was held. Cold storage experiments were requested; that the coloring of immature Oranges be prohibited; that a levy of 1d. per case be struck for advertising, and that £500 be allocated from the orchard registration fund for advertising fruit. An amendment of the pure foods regulations was desired to encourage a larger use of fruit in fruit drinks.

At the Western District Conference held at Orange, it was decided to request a rebate of the duty paid on imported Canadian softwood shooks ordered before the new tariff was imposed, whether the cases were exported or not. The cost of cases had been increased from 1/- to 1/2½. As 400,000 cases had been imported, the tariff imposed cost the growers £4,000.

* * *

Several district branches carried resolutions recommending growers' organisations to use the railways in preference to motor transport.

LIGHTNING FRUIT GRADER CO.

Change of Address.

We are asked to announce that the Lightning Fruit Grader Co. has moved from Hoddle-street, Collingwood, to larger premises at 517 Albion-street, West Brunswick, N.12. The largely increased business has necessitated the erection of bigger premises at this new address. Take West Coburg tram in William-street, city, and alight at Albion-street, W. Brunswick.

To be of use in the world is the only way to be happy.

* * *

Happiness lies in the consciousness we have of it, and by no means in the way the future keeps its promises.

QUEENSLAND FRUITGROWERS' SOCIETY.

Successful Operations.

THE QUEENSLAND FRUITGROWERS' SOCIETY LTD. held its annual meeting at Palmwoods, Queensland, on May 16.

In the annual report signed by the Chairman of Directors (Mr. Wm. Chataway), states that sales for the twelve months ended January 31, 1930, amounted to £81,237 (being an increase over the previous twelve months of £9,810): the nett profits were £1,360.

A dividend of 7 per cent. cumulative preference shares and of 5 per cent. on ordinary shares was agreed to.

During the year the Society was able, owing to increased sales and better organisation, to make considerable reductions in the retail prices of some of their main selling lines. A depot has been erected at Gympie, and branches were opened at Bapaume and Cottonvale.

The Society also has branches and agencies at Amamoor, Bowen, Cleveland, Cooran, Kandanga, Landsborough, Nambour, Nerang, Palmwoods, Samford, Stanthorpe, The Summit, Yeppoon, and Wellington Point.

Sulphate of Ammonia.—A discount of 5 per cent. on published prices is obtainable by recognised Fruitgrowers' Associations if application be made to Nitrogen Fertilizers Pty. Ltd., 360 Collins-street, Melbourne.

SOUTH AFRICAN FRUIT EXPORTS.

The quantity of fruit other than citrus exported during the 1928-29 season was as follows:—

	Packages.
Peaches	321,256
Pears	339,029
Plums	249,906
Nectarines	58,200
Grapes	521,180
Melons	2,613
Apricots	4,136
Apples	24,914
Mangoes	819
Avacado Pears	76
Pomegranates	70
Litchies	119
Granadillas	911
Prunes	18,024
Quinces	164
Persimmons	447
Strawberries	15
Pines—1929	41,541
Chillies	6
Total	1,583,426

Total, 23,312 Tons.

This is 407,863 packages less than the previous season, and is due principally to there being a short crop. It is expected that the export of the 1929-1930 crop will exceed that of any previous year.—"S. African Fruit Exporter."

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
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24 Southwark St., London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

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WESTERN MARKET
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Highest Market Rates Assured
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(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

Do not run any Financial Risk with your Fruit
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Telegraphic Address: "Apples, Brisbane."
(Hedley Geeves, Managing Director)
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FRUIT EXCHANGE——BRISBANE
SELECTED AGENTS FOR:
Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.
Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

N.Z. Fruit Export Control Board.

The N.Z. Fruit Export Control Board has issued its fourth annual report.

The balance-sheet and income and expenditure account show that the export levy for the period ended November 20, 1929, amounted to £5,665, and that all the business associated with the shipment, advertising and proper distribution of the export (including £2,340 now standing to credit of Experimental Account) was carried on, leaving a credit on the year's operations amounting to £436. This, with accumulated funds brought forward, makes a total of £3,015.

The report states that prices during the 1928 season were low, and it is thought that when the combined Australian and N.Z. crops reach a total of 4,000,000 cases there will be a lower range of prices on the United Kingdom markets.

The Board considers that the U.S.A. crop would not have a very serious effect on prices, as the English public would probably pay for the fresh article rather than that which has been in cool storage for some time. This should help to offset the American competition which had appeared to be a menace to the export trade.

The report states that the bogey of over-production had been practically disproved, owing to the wider distribution of the fruit on the United Kingdom and Continental markets. Indications show that the increasing quantity of the Apple export trade is not likely to keep up with the increased demand from overseas, and it is thought that payable prices can be looked for in the future.

Owing to the shortage of fruit in the early and mid-season, the quantity of fruit shipped to West Coast ports was much below the programme mapped out by the Board. 92,000 cases were distributed between Glasgow, Manchester, and Avonmouth, and results indicate that much heavier shipments would have been justified. The Board intends to utilise these markets to a greater extent during 1930. Efforts are being made to secure a fortnightly sailing to West Coast ports.

Australian and New Zealand Co-operation Desired.

In the report attention is drawn to the possibility of co-operation between Australian and New Zealand exporters to secure more uniformity in the supply of fruit to the English market. The London market has been known to receive 500,000 cases in one week from Australia and New Zealand, and during the following week only one-fifth of this quantity has arrived. It would be of considerable benefit if these arrivals could be regulated, but as the speed of the vessels, also the routes taken, vary, it appears that the present disabilities must continue.

A NEW SPRAY FOR APPLES.

As a result of many experiments by the Michigan Experiment Station, a new spray for Apples has made its appearance in America. The object of these experiments was to produce a spray which was non-injurious to both the fruit and the foliage.

The addition of ½lb. of iron sulphate for each gallon of concentrated lime sulphur in the spray formula was found to prevent injury to the foliage and russeting, and resulted in fruit of good size and color.

One hundred gallons of spray is mixed as follows:—Start the agitator when the spray tank is partly full of water and 1¼ lb. of iron sulphate has been added. Then add 3lb. of lead arsenate, and lastly 2½ gallons of lime sulphur. The color of the mixture is black. This is recommended for all sprays except the last or "second brood" spray.

The final spray should be a 2-2-100 Bordeaux with lead arsenate.

The Clyde Simplex Driers

For Drying
Fruit Vegetables and other Products

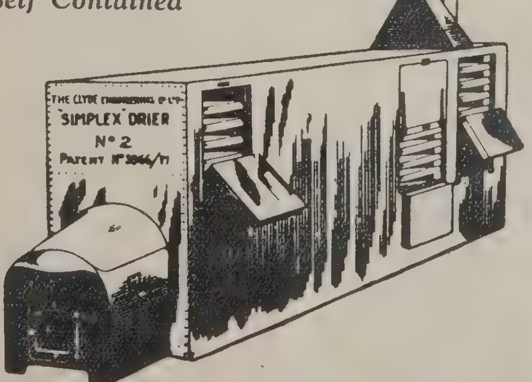
NO MORE WASTE FRUIT OR VEGETABLES

Simple - Self Contained

Made in Sizes to Suit

Householders
Small Orchardists
or
Large Factories

The
Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.



SEASONAL REPORT FOR WESTERN AUSTRALIA.

From W.A. Department of Agriculture.

Owing to the light crop, the shipment of fruit overseas has been much less than usual, only 131,917 cases having been shipped up to the end of March. The local market has during the packing season received fairly large quantities of rejected fruit, and prices for inferior Apples have been low; good fruit, on the other hand, has brought good prices, ranging from 8/- to 12/- per case.

Grapes have been very plentifully supplied, and were of excellent quality, but prices have only been moderate.

Excellent weather conditions prevailed for the curing of the dried fruit crop. Currants being processed at the cleaning sheds are of excellent quality, yielding a very high percentage of three crown grade. The "red" berry which has been so very prominent in the past three seasons being practically absent.

Most of the winemakers blended the vintage under very hot conditions, consequently temperature control was found to be difficult. It is anticipated that the yield will not be up to the previous season's.

The manager of the Illawarra Orchard (Mr. Price), in addressing the meeting, referred to the practice adopted by him of having all home fruit intended for the local market loose packed and cold stored in that way until placing it on the market. The fruit was then carefully packed, faulty specimens being eliminated.

This method ensured only good Apples and Pears reaching the local market. In order to do this, however, there would need to be cool stores at individual orchards, or such stores to be provided by co-operative effort in suitable localities.

428 DUMP CASES MADE IN EIGHT HOURS.

Mr. Geo. Simpson, orchardist, Karragullen (W.A.) states that one of his employees (Tom Newton) made 428 dump cases in 8 hours 40 minutes. During the work 15,308 nails were used.

The only assistance rendered was by a lad who kept the case timber on his bench and removed the finished cases.

This effort is thought to be a record for Western Australia.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
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Tasmanian Apples
Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.
E. R. COTTIER Pty. Ltd.
88 COLLINS STREET,
HOBART - - TASMANIA
Tel. add. "ERCOT," Hobart.
Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

WESTERN AUSTRALIA.

Bridgetown Fruitgrowers' Association.

Export and Cool Storage Discussed.

There was a large attendance at the monthly meeting of the Bridgetown Fruitgrowers' Association held on April 9. There were many visitors, including the Director of Agriculture (Mr. Sutton), the Superintendent of Horticulture (Mr. Wickens), and the Plant Pathologist (Mr. Pittman). A presentation of a suitably engraved silver tray was made to Rev. F. Davis, who had been President of the Association for twelve years. The presentation was made by the new President (Mr. Lake).

An interesting address was delivered by Mr. G. W. Wickens, in which he stated that not more than 170,000 cases of fruit would be exported this season; last year the figures were 850,000. Mr. Wickens commented on the fact that cork and bitter pit were not prevalent. The fruit sent forward had been of fairly good quality. He pointed out instances of carelessness in branding cases, and packing methods.

PACKING JERUSALEM ARTICHOKES.

A new food product has been born to California's already sizable family of canned edibles—the Jerusalem Artichoke. It is an innovation in the packing field and just what its future is, even its packers are not quite ready to state. That the product is a valuable food for diabetics is an established fact, but it is still in an experimental stage of development.

The company that has undertaken to pack Jerusalem Artichokes in California is the Pabst Dietary Products Company, Inc., of Milwaukee, Wisconsin.

Jerusalem Artichokes are packed in three different ways. They are canned in hermetically sealed tins, in puree; they are fried in fat as an Irish potato chip is made, and they are dried in the same manner as dried fruit is dehydrated.—"Western Canner and Packer."

Happiness seems made to be shared with others.

South Australia.

The monthly meeting of the Executive Committee of the South Australian Fruit Marketing Association was held on Monday, May 5. The President (Mr. H. J. Bishop) was in the chair, and there was a good attendance of delegates.

Tariff Board Conference.—It was resolved to authorise the Victorian Fruit Marketing Association to represent the South Australian Association at the Tariff Board Conference held in Melbourne.

Membership.—With a view to increasing the membership, it was decided to appoint an organiser, and applications for the position will be called for by advertisement immediately.

Gauge Rings.—It was decided to endeavour to obtain a certified set of standard gauge rings to be used for testing purposes, and to endeavour to overcome the difficulty of a variation in the sizes of testing rings used during the present season.

General Condition of Pack.—Information supplied by shippers stated that generally speaking there had been a decided improvement in the general pack of fruit during the present season, which was attributed to the efforts of the Association in securing the services of Mr. B. Krone, Victorian Fruit Packing Expert, in January last, for the purpose of delivering lectures and conducting instructional packing classes in Adelaide, and in fruitgrowing districts, but it was regretted that circumstances had prevented the services of the fruit inspectors being made fully available for instructional purposes in country districts during the season.

It is proposed in the near future to have a deputation to the Minister of Agriculture to discuss the question of securing the assistance of the inspectors in country districts during the fruit season, and it is hoped that some satisfactory arrangements may be made for the future.

EXPORT FRUIT PRICES.

The Trade Commissioner for South Australia (Mr. R. M. K. Lewis) has cabled the general manager of the Government Produce Department (Mr. G. A. W. Pope) the following information in reference to Apples shipped by the Department:—

"Port Gisborne" (Hamburg), 10/3/30.—Arrived in very satisfactory condition, on a firm market. Cleos., 12/6 to 27/6 Dunn's, 12/6 to 27/6; Jons., 8/10 to 16/8.

"Nestor" (Liverpool), 8/3/30.—Apples arrived in satisfactory condition. Cleos., 14/- to 17/9; Jons., 12/10 to 14/-.

London Market.—There is a good demand for selected varieties. N.Z. Apples: Jons., 11/6 to 14/-; others, 11/- to 13/-. Australian Apples: Jons., 11/- to 12/6; Cleos., 12/- to 13/-. Tasmanian: Various varieties selling from 9/- to 11/6 per case.

Mr. Pope states that if prices for the season remain somewhere in the vicinity of these now quoted, all growers who have shipped their Apples for sale on arrival will have a successful season and the overseas buyers who have purchased a very large percentage of the South Australian crop will have made profitable ventures.

S.A. FRUITGROWERS AND MARKET GARDENERS' ASSOCIATION.

The monthly meeting of the Executive of the S.A. Fruitgrowers and Market Gardeners' Association was held on April 23, Mr. W. H. Ind presiding.

The President congratulated Messrs. Hunter and Staniford on their election to the House of Assembly, and said he felt sure they would endeavour to obtain fair treatment for all classes of primary producers.

In replying, Messrs. Hunter and Staniford assured the Executive that they had great sympathy for the fruitgrower and gardener, and would endeavour to improve present conditions.

The S.A. Retail Grocers' Association and the Town and Country Unions wrote, stating they would support any effort to obtain cheaper sugar.

Delegates were appointed for the Hobart Conference.

TO IMPROVE THE FRUIT INDUSTRY.

Co-operative Marketing Advocated.

(To the Editor of the "Fruit World.")

Sir,—At the recent Flower and Fruit Show, held in the Melbourne Town Hall, I was much attracted by the pyramidal exhibit of packed fruit boxes arranged by a proprietary firm. Looking backward ten or more years, I recollect the germ of this idea of using the world's standard case being planted in the minds of Victorian orchardist when the late Mr. Sydney Stott imported an expert packer from U.S.A.

Evolution is not dead, even in such refractory material as Apple growers. I recall the long fight we had to obtain cool stores under Government assistance, and now that these "homes" are in going order, I look forward in about another ten years to the further development of business sense, to sell fruit in a co-operative manner, locally and overseas, scrapping the old methods now in use, and which are still prevalent among the natives of Central Africa.—Yours, etc.,

A. G. CAMPBELL.

Kilsyth, Vic., 19/5/30.

LATE FRUIT SHIPMENTS ARRANGED.

The Aberdeen and Commonwealth Steamship Co. advises that the s.s. "Moreton Bay" is loading 55,000 cases of Apples at Hobart on June 28, and will pick up an additional 10,000 at Melbourne on July 2.

This is understood to be the latest commercial shipment of Apples so far sent from Australia.

"Windolite—Glass Substitute.—Messrs. C. H. Leaver & Co., of 524 Collins-street, Melbourne, direct attention to their glass substitute—"Windolite"—a fabric which is transparent, flexible, and unbreakable, admitting the healthful ultra-violet rays of the sun. This fabric is of value for fruit houses, poultry houses, gardeners' raising frames, propagating houses, etc.

There is in all of us an impediment to perfect happiness, namely, weariness of what we possess, and a desire for what we have not.

Cold Storage of Apples.

Investigations at Nelson (N.Z.), Seasons 1927 and 1928.

AN ACCOUNT of the main investigations of the Cawthron Institute into some of the difficulties associated with the cold storage of Apples in the Nelson district during the 1927 and 1928 storage seasons is given in the recently published Bulletin No. 16 of the Department of Scientific and Industrial Research, by Mr. L. W. Tiller, Orchard Chemist to the Institute. The report is summarised as follows:—

(1) For securing uniformity of temperature at all points in a small experimental chamber cooled by a direct expansion dry battery situated outside the room, an air-circulation system operating from ceiling to floor has given the best results.

(2) Less internal breakdown develops in a store in which the relative humidity of the air is kept low than in a store where the humidity is high, provided the flesh-temperature is the same in both stores.

"YARRA"

QUICK BREAKING

White Oil Emulsion

Easy to mix, Effective in result,
Economical in quantity.
USE NOW
ON CITRUS TREES.

PARSONS & JAQUES
Manufacturing Chemists,
6 Patterson St., 155 Yarra St.,
Abbotsford, Vic.

Tasmanian Agents—
N. L. HOPKINS, HOBART.

(3) Internal breakdown is more in evidence at low storage temperatures than at high, although varieties differ considerably in their power of resistance to low temperature.

(4) Internal breakdown as it occurs in the Nelson district is compared with similar physiological diseases occurring in America.

(5) Fruit grown on good soils generally shows superior storage qualities to that grown on naturally poor soils.

(6) Cultivation of the orchard and climatic factors exercise a profound influence on the keeping quality of the fruit.

(7) A well-balanced manurial programme carried out on the orchard has materially improved the storage qualities of the fruit.

(8) The root-stock upon which a variety is worked may influence the condition in which the variety turns out at the end of its storage period.

(9) Jonathan-spot is differentiated from bitter-rot, with which it is frequently confused.

(10) A limited measure of control of Jonathan-spot is afforded by the use of oiled wrapping-paper.

(11) Soil conditions and manurial treatment of the orchard cannot at present be correlated with the incidence of Jonathan-spot.

(12) Except in one instance, temperature has had no consistent effect on Jonathan-spot development. In the exceptional case there was less trouble in evidence at a storage temperature of about 38 deg. F. than there was at 32 deg. F.

(13) Storage humidity has had no effect on the incidence of Jonathan-spot.

(14) Delay between picking and storing usually causes a slight rise in the percentage of Jonathan-spot, but the increase is very small compared with that produced by late picking.

(15) The best control of Jonathan-spot at present available is given by picking the fruit as early as can be done without sacrificing the essentials of color and flavor.

(16) The use of oiled wrapping-paper gives a very substantial reduction in the amount of shrivel in stored Apples without detrimentally affecting them in other ways.

(17) Jonathans picked and packed as for export were put into store for three months and then kept out of store for periods up to three weeks. In no line did severe breakdown exceed 3 per cent., and fungal trouble was almost totally absent. Factors governing this experiment are similar in some respects to those obtaining in the New Zealand export trade.—"N.Z. Journal of Agriculture."

FERTILISERS FOR ORCHARDS AND GARDENS.

Messrs. Henry H. York & Co. Pty. Ltd. (late Dyes & Chemicals (Aust.) Ltd.), have announced elsewhere in these columns new reduced prices for their well-known concentrated complete fertiliser Nitrophoska, as well as for two nitrogenous manures, which may be new to some readers. It is not often that a new fertiliser springs so quickly into prominence as Nitrophoska has done, both in Australia and New Zealand. Not only are its composition, high concentration, and price attractive on paper, but it has proved itself in the orchard on all forms of fruit. It is not claimed that Nitrophoska alone is all that is necessary for any crop of fruit, although such is approximately the case in many instances. For good fertiliser treatment, a green cover crop should be sown down in the autumn with super., and ploughed under in the early spring. Then a dressing of from 3—5 lbs. per tree of Nitrophoska just prior to blossoming, followed in some cases by a top-dressing 2 or 3 lbs. per tree of some quick-acting nitrogenous manure during the setting of fruit, would constitute good manuring—lime, of course, should be applied at intervals.

As regards nitrogenous manures, the attention of fruitgrowers, particularly citrus growers, is drawn to the two new synthetic fertilisers, Calnitro and nitrate of lime. The nitrogen in each case is combined exclusively with lime, thus every portion of these manures is of value either to the tree or to the soil. Calnitro contains equal parts of the quick-acting nitrate nitrogen, and the slower acting ammonia nitrogen. Both are ideal fertilisers for late top-dressings during the setting of fruit.

Don't grumble, don't bluster,
Don't dream and don't shirk,
Don't think of your worries,
But think of your work.
The worries will vanish,
The work will be done.
No man sees his shadow
Who faces the sun.

Sugar and Fruit Industries.

Keen Discussions at Australian Fruitgrowers' Conference.

Mr. Ranger Defends Sugar Agreement.

Conference Between Sugar and Fruit Industries Desired.

THERE was an animated discussion at the Australian Conference of Fruitgrowers at Hobart, on the sugar question.

In opening the subject, Mr. R. E. Boardman said the Sugar Agreement detrimentally affected the Australian fruit industry. There was a serious decline in the manufacture of jam by factories and by the general public. Plum orchards were going out of cultivation, and Tasmanian berry gardens were in a deplorable condition: the factories being unable to take the fruit for jam purposes. The manufacture of jam in factories had fallen from 86,000,000 lbs. weight in 1912 (when the population was 4,700,000), to 85,000,000 lbs. weight in 1927-8 (when the population had increased to 6,500,000). In other words, the consumption had fallen from 18 lbs. per head to 13 lbs. per head of population. Had the consumption of jam last year remained at the 1912 level, there would have been an increased output of 32,000,000 lbs. Reckoning jam at half sugar and half fruit, this loss represented 16,000,000 lbs. of fruit, or 400,000 bushels. This was an annual loss, and did not even then include the decline in the home-made jams. The Housewives' Association, after careful research, discovered that much less jam was being made nowadays because of the high price of sugar.

While the fruit industry was suffering, the sugar industry, under Government agreement, was greatly prospering. Yet the conditions were artificial. Sugar prices in 1914 were £18 (including £6 per ton duty); the price to-day was £37 per ton. The duty was nominally £9/6/8 per ton, but this was not operating because of the embargo on importations—which had been in existence for 14 years. The price to canners and jam manufacturers was £30/6/8 per ton for home consumption. Sugar in goods exported, was stated to be charged at world's parity, but this was a fallacy—there was no rebate on the sugar contents of goods for the New Zealand trade (a logical market for Australia), and further, in computing "world's parity," the Sugar Board added an unnecessary surcharge of £4 to £5 for refining. "Millwhite" (or unrefined) sugar was suitable for jam making.

Australia now produces 500,000 tons of sugar per annum: 300,000 tons were needed for Australian consumption, leaving 200,000 tons for export at a serious loss. The export price was about £11 a ton, the Australian price (refined), £37 per ton. The loss was borne by the Australian public.

The Development and Migration Commission, in its recent report on the canned fruits industry had recommended that an enquiry be conducted into the sugar question as it affected the fruit industry. The Prime Minister, Mr. Scullin, at a recent meeting in Tasmania, had declared that something was wrong when one industry unduly oppressed another. An open enquiry would be welcomed.

No more land could be put under cultivation for sugar without a permit. Sugar lands were at a fictitiously high price. The thrifty Southern European element was now threatening to dominate the situation.

In conclusion, Mr. Boardman said it was with no desire to harm the sugar industry that this subject was brought forward. The matter should be ventilated and quietly considered on its merits: a basis of arrangements between the sugar and fruit industries was possible to give much needed relief to the latter. He moved:

"That this conference endorses the request of the Development and Migration Commission for the holding of an enquiry into the sugar industry as affecting fruitgrowers, and that in the meantime a conference be held between sugar and fruit interests to reconcile conflicting viewpoints."

Mr. H. M. Thompson, representing the Commonwealth Government, submitted figures showing that the price of sugar had little or no bearing on the canned fruits industry.

Mr. C. W. Giles said the fruit industry in South Australia was seriously suffering because of the unfair incidence of the sugar agreement. Australian sugar prices were unduly high. Sugar from Papua—under Australian jurisdiction—was not permitted entry.

Mr. B. J. Pearsall, M.H.A. (Tasmania), said that there was much suffering among the berry-fruit producers: the outlet for their fruit had vanished. Yet their lands were only suitable for berry fruit production. The sugar industry was certainly to blame for the deplorable condition of these settlers and their families.

Margetson & Co. Ltd.

Fruit Importers and Salesmen

30 James Street and James Street Warehouses,
11 Neal Street,
COVENT GARDEN, LONDON, W.C.,
and at Jamaica House,
9 and 10 Botolph Lane, London, E.C., and
56-58 Stanley Street, Liverpool.
Sales by PRIVATE TREATY.
Prompt Returns and Settlements.
Tel Add.:—FRUTERO, LONDON.
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Shipping Nos.: 431 and 432.

Mr. W. Ranger (Queensland) defended the Sugar Agreement. Australia was committed to a policy of protection: the sugar industry under "White Australia" conditions needed the protection it now enjoyed. Fruitgrowers were illogical in seeking high tariff and embargoes in connection with the various sections of their industry, and at the same time condemning Queensland for desiring conditions under which the important sugar industry could live. After all, only 8 per cent. of the fruit industry was seriously affected by the sugar position. The balance of 92 per cent. was consumed as fresh fruit, dried and preserved fruit, wine, etc. The duty on jam was so prohibitive that it really amounted to an embargo. The Sugar Board would gladly allow the

SULPHATE OF AMMONIA
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And the principal facts about Sulphate of Ammonia are that it puts quantity, along with good quality, into all kinds of crops and gives a decided bump to both yield and profit.

Over and over again this quick acting fertiliser has doubled production, sometimes in the very face of adverse conditions and time after time it has outshone other types of fertilisers.

In Sulphate of Ammonia you have nitrogen in its ideal form—rich, readily soluble and quick acting—little wonder is it, therefore, that this fertiliser has won the distinction, "the big crop producer."

Experience has shown that no "complete" fertiliser is really complete without Sulphate of Ammonia, and it has also proved that nothing is quite as good as Sulphate of Ammonia "straight" for putting the finishing touches to a crop.

Fertiliser agents everywhere sell Sulphate of Ammonia and also complete fertilisers containing Sulphate of Ammonia. If you would like to know more about the money value of this high grade fertiliser, write to the address given below for free literature.

NITROGEN FERTILISERS PROPRIETARY LIMITED

Sydney Address:
Box 481AA, G.P.O., SYDNEY.

Melbourne Address:
360 Collins Street, MELBOURNE.

rebate on the sugar contents of jam and canned fruits exported to New Zealand, but a trade agreement between the Dominion and the Commonwealth prevented it.

The consumption of jam was declining in other countries besides Australia, due, doubtless to other foodstuffs being on the market. In particular there had been a large increase in the consumption of canned fruits in Australia: thus the growers were really getting a sale for their fruit in this form.

He could not agree to the request for a Government enquiry, a tedious and costly business. So far there had been unanimity at the conference. It should be possible however, for the fruit industry to confer with the sugar industry to find common ground.

Mr. F. L. S. Willmott (W.A.), congratulated Mr. Ranger on his address. Words, however, were given "to conceal our thoughts," and he was not convinced as to the fairness of Queensland's attitude on this subject.

In reply, Mr. Boardman said that Mr. Ranger had not dealt with the major points of his remarks. The D. & M. Commission, the Prime Minister (Mr. Scullin), the British Economic Mission were agreed that aspects of the sugar industry warranted investigation. The sugar industry was highly socialised. To get a unanimous vote he would, with the consent of his seconder, alter the resolution to read:

> That this Australian Conference of Fruitgrowers, after consideration of various aspects of the sugar position as affecting fruitgrowers, desires that a conference be held between sugar and fruit interests, with a view to reconciling conflicting standpoints.

The motion in this form was carried unanimously.

It was decided to ask Mr. F. H. Peacock and a Tasmanian berry grower, to represent Tasmania at the proposed conference.

POMOLOGICAL COMMITTEE.

Need for Its Re-establishment.

Introduction of New Varieties and Eliminating Old Varieties from Catalogues.

THE NEED for the re-establishment of the Pomological Committee was stressed at the Australian Conference of Fruitgrowers held at Hobart May 5 to 9. Nurserymen and fruitgrowers were unanimous as regards the value of the work accomplished by the Pomological Committee in the past and the necessity for the work to be continued. It is some years since the Committee has met. Its main functions were to examine any new varieties of merit, and to secure uniform nomenclature.

Despite the good work of the Committee, there is still a serious duplication of names of varieties. The "Cleopatra" Apple on the mainland is still "New York Pippin" in Tasmania. The "Williams" Pear in Victoria is known as "Duchesse" in S. Australia, and "Bartlett" in Western Australia: it is also known as "Bartlett" in California.

There are scores of other varieties similarly duplicated.

These duplications are most confusing to the traders and the public, and the good name of Australia suffers thereby.

The opportunity is now present for nurserymen and fruitgrowers to get together in a mutually helpful way to perform practical service of economic importance.

Previously the Pomological Committee was Australian-wide in character, there being four delegates from each State, viz., the Government Senior Horticulturist, a nurseryman, and two fruitgrowers. The Government nominated one of the fruitgrowing delegates and paid his expenses.

It is thought to be quite unlikely that the State Governments will continue—even when times improve—to pay the expenses of a fruitgrowing delegate.

Nevertheless, the work is of such importance that there should be no difficulty in securing the attendance of representative men to re-commence activities where the Committee left off a few years ago. Mr. E. E. Pescott, F.L.S., Victorian Government Pomologist, performed good service as Secretary of the Committee.

* * *

Arising out of the Pomological Committee's work was that very important question of the reduction of varieties in catalogues.

Big reductions have already been made in the catalogues of fruit tree nurserymen: this proved of value both to the fruitgrowers and the fruit tree growers.

SPRAYING and LIMEWASHING

The Vermorel "Eclair" Series

Watch this space every month for a different type of Sprayer

No. 1—The Original Knapsack Sprayer

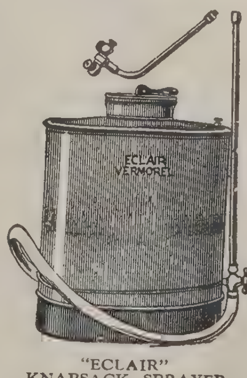
This is the standard type of Knapsack Sprayer, and can be used for almost all spraying work. It is fitted with a Double Nozzle (which can be converted into a single nozzle), a Special Bent Tube for spraying underneath the leaves of potatoes, etc., Spare Jets and Strainer, complete in box.

Special models are made for use with Lime Sulphur, Liquid Acids, etc. For Lime Washing an Agitator is fitted and lengthening lances for spraying up to 20 ft. are made.

ALL TYPES OF SPRAYERS MADE AND STOCKED.
1¾ Pints to 88 Gallons.

PRICES FROM 4/- to £81/10/-. Home Retail Price, 42/-, Complete.

A List of Firms in Australia Stocking Our Sprayers will be Sent on Application to the "Fruit World," or Complete Catalogue will be Sent Free of Charge by



"ECLAIR" KNAPSACK SPRAYER
Capacity 3 1-4 gallons

COOPER, PEGLER & CO. LTD., 24c/26 Christopher St, Finsbury Square, London, E.C.2.

"To Choose the Best is Wisdom'

Change of Address **Change of Address**

The

"Lightning" Fruit Grader Company

(Formerly of Hoddle Street, Collingwood)

We have acquired a large area of land at West Brunswick—erected spacious factory buildings and offices and installed the most up-to-date and modern machinery and equipment. The position is an ideal one, and will enable us to cope with the ever-increasing demand for the machines and equipment which we manufacture for the individual grower and packing house.

Note the New Address—

517 Albion Street
West Brunswick, N.12., Melb.
AUST.

(Take West Coburg electric tram at William-street, City, and alight at Albion-street, West Brunswick.)

The Success of "Lightning" Graders and Equipment

is due

To the quality of its construction—its efficiency and the service and benefit which is obtained from its use. Only those who have a thorough knowledge of fruit handling can successfully manufacture machines of this description. So that we can render an even greater service to the industry than we have done, we have, at considerable expense, changed over to the new factory. With better facilities for manufacturing the many appliances required for handling fruit for local and export market we can supply in much greater quantities everything that is needed in the Packing House. The continued demand from every fruit area of the Commonwealth and from Countries outside of Australia, has rendered this change necessary.

The Success of the Fruit Industry
depends on

The equipment and facilities adopted to handle the fruit. What we have done, the packing house and individual grower will have to do, to obtain profitable returns from his fruit. Organisation is the keynote of every industry and the packing house, whether it is on the orchard or a large central pack, must be well equipped to obtain the best results.

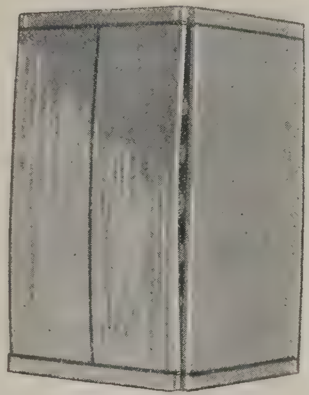
The "Lightning" Fruit Grader Company

Canadian Standard Cases

C. H. TUTTON Pty. Ltd.

ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

Telephone: F 3148 (3 lines). Telegraphic Address: "TUTBOX."



Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

MARINE GROWTH AS MANURE.

Valuable Humus Supplies.

With intensive cultivation, the increase of motor traction, and the ever-increasing difficulty of securing supplies of animal refuse, the problem of securing adequate supplies of humus is gradually becoming a serious one, and no matter what quantities of artificial fertilisers containing the essential plant foods, phosphoric acid, potash and nitrogen are applied to the soil, will remain the paramount problem confronting the cultivator, writes the Melbourne "Leader."

In this respect the following details of "Cicada," a natural manure, which is being developed from vast deposits at Rye, on the eastern littoral of Port Phillip Bay, are of interest.

This tract of country was undoubtedly at one time the bed of the sea, and it is assumed that the original outlet of Port Phillip Bay to the ocean was across this vast tract, and joined with the waters of Westernport. Whether the outlet was silted up by the sands carried by the tides, or was closed by submarine upheaval has not been determined, but it was closed, and the exposure of the vast bed of marine growth which covered it to the air and sunlight, resulted in its decomposition and the death of myriads of minute shell fish which inhabited it.

This material is a natural manure of vegetable and animal origin, in combination with artificial fertilisers, particularly superphosphate and sulphate of ammonia, thereby furnishing the soil with an almost perfect complete fertiliser in the strictest sense, for, in addition to essential plant foods, the soil receives direct treatment with lime and humus. The distributors recommend that it be used on a minimum basis of 50 per cent. Cicada with 50 per cent. superphosphate, and with sulphate of ammonia on a basis of 5 per cent. sulphate of ammonia and 95 per cent. Cicada. Cicada, as already pointed out, is not a chemical fertiliser, but a natural manure, which will not injure the most tender plant, even if planted in it direct. It is odorless and pleasant to use, and is therefore ideal for the orchardist or home gardener, who can practically secure the same results as with the use of stable manure, and at the same time obviate the necessity of having a heap of decaying manure in the garden, with its accompanying obnoxious smell and myriads of flies. It is not claimed for Cicada that it will take the place of quick-acting chemical fertilisers, but it is claimed for it that it will regenerate exhausted and worn-out soils, and make them more retentive of moisture, and there ase many instances where growers have harvested much higher yields after its use than they did before.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle Etc.

A NEW SPRAY and a NEW SPREADER

Crystol-85

The Australian-made White Oil Emulsion,
Containing 85 per cent. by weight
Pure Refined Paraffin Oil.

CRYSTOL-85.
For Use on Citrus and Deciduous Fruit
Trees and Plants in Full Leaf,
With Perfect Safety.

CRYSTOL-85.
Most Effective in Killing **Red Scale** at
Any Season.
Brown Olive Scale in January and
February.
Also White Wax Scale and White Louse.
Wipes out **Red Spider.**

CRYSTOL-85.
Smothers Codlin Moth Eggs.
And is Valuable in Conjunction with the
Usual Arsenate of Lead Programme.
Is Cheaper than some other oil emulsions, and is **More Effective,** as it contains more oil, but at the same time is Absolutely Safe to Use.

CRYSTOL-85.
Of Tremendous Benefit in Combating **Peach and Cherry Aphis,** etc., in Combination with Nicotine Sulphate (Black-Leaf 40).

MANUFACTURED IN AUSTRALIA.

FLUXIT

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Instantly Soluble.

WHAT makes every spray a more efficient spray by transforming it into a colloidal solution?—**FLUXIT.**

WHAT makes a perfect spray that wets thoroughly, spreads uniformly, and clings to the surface?—**FLUXIT.**

WHAT makes the standard amounts of Arsenate used in sprays much more efficient to kill?—**FLUXIT.**

WHAT gives better results with one half pound than one pound of obsolete spreaders did before in Arsenate of Lead sprays?—**FLUXIT.**

WHAT gives Nicotine, Lime Sulphur, and Bordeaux sprays a thicker film, that wets better, stays longer, and makes the Nicotine Sulphate more efficient to kill?—**FLUXIT.**

WHAT makes a much more effective spray of White Oil-Arsenate of Lead combination, by absolutely preventing curdling?—**FLUXIT.**

There is No Substitute for FLUXIT.

Manufactured by Colloidal Products Corporation, San Francisco, U.S.A.

"APPLIM" Brand AGRICULTURAL LIME

BURNT and GROUND. 95% CALCIUM CARBONATE.

PURER, FINER, CHEAPER.

LOWER FREIGHT (railed from Footscray).

Australian Agents:

Lawford's Fruit Exchange Pty. Ltd.
DONCASTER, VICTORIA

Growers! Write for Full Information. Agents Wanted where not represented.

New South Wales.

COUNTRY ORDER TRADE.

(By a Correspondent).

Some owners of large citrus orchards have this year planned to place heavy supplies amongst the country traders, and already orders are being booked. This practice has been carried on for years past, and has never yet proved entirely successful. Country order agents agree that this class of trade carries a considerable element of risk as regards accounts, and are exceedingly particular to whom they send supplies. I have knowledge of one now defunct packing house which owed much of its financial troubles to indiscriminate credits, in which not only direct trade to the country bore its part.

Whilst travelling through the State I have seen wonderful opportunities to create a transient clientele, but always hesitated when considering the difficulties with which an individual grower is faced when catering to supply a specific trade by himself. Early consignments are probably quite easy to send forward, but as prices commence to rapidly fluctuate and as public taste begins to vary, it is by no means easy to give complete or even partial satisfaction.

Growers have from time to time advocated public auctions on stated days in the various country towns, and many are eager supporters of those already existing. As one who has attended these in all parts of the State, I say most emphatically, that every possibility for good is stultified by the disregard for decent packing, which characterises the operations of a number of men who patronise these markets. I have seen very inferior fruits displayed for sale in the shop windows in country districts, and can honestly profess to a sense of shame that this can by any means be tolerated.

By all means foster the country trade, but let us first consider continuity of supplies of suitable high-grade fruits—always bearing in mind the fact that as our country people pay good prices for what they get, they have the right to insist upon value for money.

Plenty of Room.

"Don't you think his voice is a little too big for the hall?" she asked, as the basso exercised his lungs to full capacity.

"Yes," said he, "I think I'll go out if you don't mind, so as to leave it a bit more room."

Crushed Peaches Popular in U.S.A.

During the past year the Fruit Products Laboratory of the College of Agriculture of the University of California packed 600 cases of crushed Peaches in experimental work with this product, in co-operation with the California Canning Peach Growers and some California canners. The new product has been placed on sale in grocery stores in the San Francisco Bay district, and in a number of cities throughout the central part of California in order to determine the opinion of consumers.

It has also been demonstrated in stores in several Eastern cities. The response of the public is reported to have been very favorable, and repeat orders are frequent, indicating that this new product promises to become popular. Crushed Peaches are prepared from well-ripened, peeled and pitted cling Peaches, by grinding coarsely, heating to boiling, with a moderate amount of sugar, canning hot and sterilising in the sealed cans in the same manner as halved Peaches. Existing cannery equipment is used in the preparation and canning, making the process easily conducted and inexpensive.

Unsweetened crushed Peaches were packed in large cans for experimental use by bakers, ice-cream manufacturers, and confectioners, by the Fruit Products Laboratory of the University of California.

The University's specialists believe that crushed Peaches, properly introduced by sustained advertising, would make use of much of the annual surplus of canning Peaches. Plans are being made to increase the experimental pack. The investigations are under the general direction of Professor W. V. Cruess, of the Fruit Products Laboratory.

HER FIRST TRIP ABROAD.

Monday.—Everybody came down to see me off. Everybody is lovely.

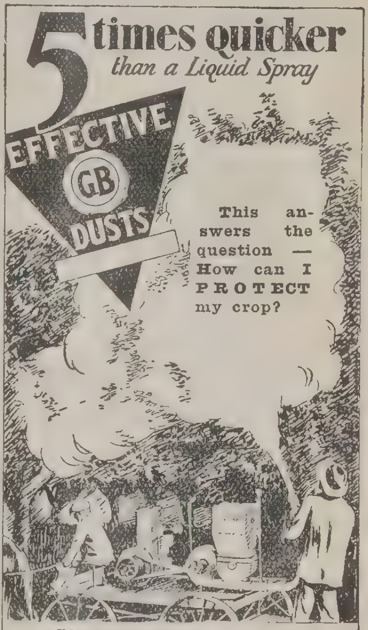
Tuesday.—Am having a fine time. Met the captain of the ship.

Wednesday.—Captain tried to kiss me. I indignantly refused.

Thursday.—Captain is wild with anger. He says that unless I consent he will blow up the ship.

Friday.—I saved the lives of five hundred people.

DUSTING



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Adelaide.

BOX MAKING
MILLERS' BRITISH-MADE
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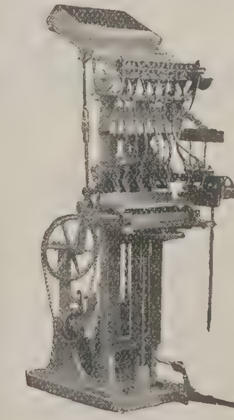

SOLE AGENTS,
GIBBS, BRIGHT & Co.
27 Grenfell Street, ADELAIDE

COOPER PRODUCTS

I UNDERTAKE AND I PERFORM

CODLIN MOTH TESTS

AUSTRALIAN PRODUCT APPROVED

Recent official tests of oils for Codlin Moth control, conducted on Mr. T. Code's orchard, Harcourt, Victoria, resulted in the Victorian Agents for Cooper's "Alboleum" receiving a letter from Mr. C. French, Government Biologist, officially stating that Cooper's "Alboleum" gave results equal to any other oil used in the tests.

This Departmental decision is supported by the owner of the orchard on which the tests were carried out.

"COOPER'S ALBOLEUM"

Is Manufactured in Australia by

WILLIAM COOPER & NEPHEWS (Australia) LIMITED

Manufacturers of the World Famous
Cooper's Sheep and Cattle Dips

COOPER'S "ALBOLEUM" IS OBTAINABLE FROM:—

N.S.W.—
William Cooper & Nephews (Australia) Limited, Sydney, and Agents.

Victoria—
Cooper Engineering Co. Ltd., Melbourne.

Tasmania—
Bender & Co. Pty. Ltd., Launceston; A. G. Webster & Sons Ltd., Hobart.

South Australia—
Elder, Smith & Co. Limited, Adelaide.

West Australia—
The Westralian Farmers Ltd., Perth.

Queensland—
Queensland Fruitgrowers' Society Ltd., Cleveland, Brisbane.

W.A. CITRUS CROPS.

Mr. Geo. W. Wickens, Superintendent of Horticulture, writes as follows under date May 28:—My estimate of the citrus crop in Western Australia this season is as follows:—

	Cases.
Oranges	240,000
Mandarins	14,000
Lemons	55,000

The average crop for Oranges for the last five years for which particulars are available amounts to about 206,000 cases, so that my estimate of this year's crop, if obtained, will be 34,000 cases in excess of the average.

TASMANIAN FRUIT SHIPMENTS.

Over 2¼ Million Bushels of Apples and Pears to June 1.

R.M.S. "Maloja" left Hobart on June 1, after having lifted 51,557 cases of Apples and 3,000 cases of Pears for London.

The "Largs Bay" sailed from Hobart on June 1 with 95,358 cases of Apples for London and Hull. The total shipments to June 1 from Tasmania are 2,140,086 cases, 536 half-cases, and 1,714 trays of Apples, and 132,893 cases, 22,136 trays, and 2,145 packages of Pears.

Wires: POMPOIROP PARIS

MEMBER OF THE NATIONAL FEDERATION OF FRUIT & POTATO TRADES ASSOCIATIONS INCORPORATED LIMITED

30 YEARS' TRADE EXPERIENCE

CONNECTION WITH ALL EUROPEAN COUNTRIES

E. SCHEIBER

Commission Agent
and Wholesale Distributors of
British Colonial Fruit.

17 Ru Francois Miron, Paris (4E)
France.

Correspondence in English Language Invited.

Highest References at your Disposal.

Further Reduction in Price of
The Well-known Air Nitrogen Fertiliser

NITROPHOSKA

Price Now :— £20/15/- Per Ton F.O.R. Melbourne

Also Note Improved Composition:

Nitrogen as Nitrate equals	4.5%
„ „ Ammonia equals	11.5%
Total Nitrogen equals	16.0%
Phosphoric Acid (all soluble) equals	16.5%
Potash equals	21.5%

Apply 3-5 lbs. per Full Bearing Tree just before Blossoming.

Such an application will provide, in most cases, all the Phosphate and Potash that the tree requires. **Extra Nitrogen** is best applied in the form of **Green Manure**, and some purely Nitrogenous manure during the setting of Fruit.

ORDER EARLY through your Agent, or direct from

Limited Quantities only Available.

Henry H. York & Co. Pty. Ltd., 573-585 Lonsdale St., Melb.

(Late Dyes & Chemicals (Aust.) Ltd.)
Sole Distributors.

Write for Pamphlet.

What do your **EGGS** cost to produce?

Karswood
Poultry Spice
1/-

No matter whether you are dependent on your poultry for a living, or whether you are a backyarder with an interesting and useful hobby—you should know exactly what your cost of production is. Have you ever thought to investigate what that cost is? You might find if you did that it was out of all proportion to the return you are getting.

The acid test for any egg-producing system is to divide the number of eggs obtained in any given period into the cost of the food used. If you are one of the happy band of users of Karswood Poultry Spice (containing dried and ground insects) you will find that the cost of producing each egg is very little. The cost of production would be low, because for the very small expenditure—very small actually and relatively—necessary to keep your fowls supplied with Karswood, you will get a very large increase in the number of eggs produced. Not only will you get more eggs, but they will be larger and better eggs.

A 1/- packet will supply 20 hens for 16 days. Buy a packet to-day and test it for yourself.

"Wonderful Increase in Egg Output"

I have used Karswood in England when I was only a "Backyarder." I came out here some 8 years ago to take up Poultry and Pigkeeping. I now have a small flock of 70 hens—about 65 White Leghorns and 5 Black Orpingtons, in their 2nd and 3rd seasons. I keep them in a large run—about ¼ of an acre, and let them out for a run every day for two hours or so. I took up Karswood again on the 26th June of this year. I feed 8lbs. of pollard wet in the morning with your allowance of spice, and 8 lbs. of wheat at night. After some 8 weeks of this I have had to reduce these quantities to 6 lbs. each. In addition they get a good picking of grass etc. when they are let out, and twice a week they get all the vegetable trimmings from my small stock. Up to the present I have noted the egg yield as follows:

	Last Year	*This Year*
June	253	92
July	242	427
August	679	1166

(The number of hens was the same both years—in fact they are the same birds.) To date the yield for September is in excess of last September; but will write later.

(Sgd.) G. GUMPRICH, Pinjarra,
17/10/29 *Western Australia.*

"Much Larger Eggs and Many More"

"I may say I have had much larger eggs and many more since using "Karswood" and my few fowls I keep in the garden are far better and brighter looking birds since using it. I have repeatedly passed on the good word to many people in a small way like myself. Wishing Karswood every success."

(Sgd.) Mrs. L. HUCKLE, Kew,
2/6/29. *Melbourne, Victoria.*

"Regular Supply of Eggs in Winter"

I have been using "Karswood" Spice for two years now and in that time I have never been without eggs, and the birds that I have killed for the table have been enough for three persons for two meals. I have a pen of five pullets and a rooster, who have been separated from the flock since May last and have laid on an average of two eggs per day. I have had in those months 460 eggs from those pullets, and May, June, July and August are the coldest months for this part. I can recommend "Karswood" Spice to anyone who keeps fowls in the backyard.

(Sgd.) W. L. N.
Original letter on file for inspection

"Increased Egg Supply and Improved Condition of Birds"

Sir,

"For five years up to 1929 I have kept on an average 50 head of poultry—two breeds only—White Leghorns for eggs and Black Orpingtons for the table. I have used your spices which greatly increased my egg supply and also wonderfully improved the condition of my birds. Wishing you every success with your wonderful spice."

(Sgd.) J.E. FILDAY, Warrnambool P.O.
15/5/29. *Warrnambool, Victoria.*

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half a dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/- packet supplies 20 hens for 16 days;
2/- packet supplies 20 hens for 32 days;
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½ lb. packet, 1/-; 1 lb. packet, 2/-; 7 lb. tin, 13/-; 14 lb. tin, 25/-; 28 lb. tin, 48/-.

3.M..0

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

Poultry Notes.

HATCHING operations on many farms will commence this month.

* * *

Upon the eggs selected for incubation will depend the success of the future.

* * *

See that every egg put into the machine is at least 2 ozs. in weight.

* * *

Make the hatching season the time for building up your flock by producing pullets full of vitality and stamina.

* * *

Do not incubate any eggs that are more than a week old, if best results are to be expected.

Questions:

"H.W.B." (Brighton) asks:—

1. Half a dozen White Leghorn pullets in a flock of 100 have pale withered combs. Worms cannot be the trouble as they have been treated for this and none were found. They are carefully fed, diet consisting of wet mash and 1/3rd greens, wheat, etc. They are November hatched.

2. How long before eggs are required should cockerel be put with pullets?

3. Would eleven pullets be too many in breeding pen of 12 x 30 ft. size? Or could this number be increased?

4. What is a good size for a cockerel pen? Is about 12 x 3 ft. large enough?

5. What is greatest number of days eggs may be kept for use in incubator if carefully stored in cool place or in bran?

Answers:

1. It is not unusual for a small percentage of pullets from late hatched stock to be backward, and the six to which you refer may never develop into very profitable birds. If the other 90 odd are in good condition, and have come into lay, there is apparently nothing wrong with the management. Late hatched chicks usually include a percentage of pullets that do not develop. There are various causes. Sometimes the germ in the egg is not as strong at the end of the season, or possibly the runs have not been as fresh as earlier. The few that have pale withered combs may as well be culled out now. It doesn't pay to feed drones.

2. In a single mating, three or four days would probably be sufficient to secure fertility, but if you are mating up a breeding pen it would be as well to have the cockerel mated for at least seven days before using the eggs for hatching.

3. A breeding pen, 12 x 30 ft. would give an area of 40 square feet, which should be sufficient to accommodate your eleven pullets. As a guide when building breeding pens, it is usual to plan for providing accommodation on the basis of 4 sq. ft. per bird.

4. A cockerel pen of the size you mention would be ample. Some breeders use a much smaller pen, with yard attached.

5. It is unwise to use eggs more than ten days old for hatching under any circumstances, though a percentage of chicks would probably hatch from eggs stored in a cool place for a considerably longer period. The best results are obtained, however, by incubating eggs that are not more than a week old—the fresher the better.

S. AUSTRALIAN APPLES IN ENGLAND.

15/4 for Cleos. and 14/9 for Jonathans.

The New Pack in Softwood Cases, Wire-bound, is Appreciated.

GOOD prices for South Australian fruit have cheered the growers in that State. The Trade Commissioner (Mr. R. M. K. Lewis) has cabled to the manager of the Government Produce Department (Mr. G. Pope), stating that S. Australian Apples were realising higher prices than fruit from the other States. The best average was 15/4 for Cleos. and 14/9 for Jonathans. Estimating the charges at 8/- per case at foot of tree, these returns are 7/4 and 5/9 respectively, against growers' estimate that 3/6 was a payable price.

To May 21, 614,976 cases had been shipped. This would normally have closed the season: arrangements were made, however, to send an additional 15,000 cases by the Port Campbell on June 12. Thirty-two steamers called for S. Australian Apples: as cables have been received giving results for 13 steamers, nearly half the pack had been sold.

The Trade Commissioner commented favorably on the clean and sound condition of the fruit, the chief cause being the light-colored pinewood used, and the wire strap at the end of each case. They nearly approached the Canadian pack: in earlier shipments the Australian boxes were not packed with sufficient bulge, but this was remedied in later boats.

Commenting on the foregoing, Mr. Pope stated that catalogues from England showed S. Australia had gained much ground in the market with the new pack, and that many shipments were within 6d. of the New Zealand price.

Manchester (30/5/30).—Ex "Banffshire."—Jons,, 9/6 to 11/6; Cox's, 10/- to 13/3; Cleos., 11/9 to 13/-; Alf., 10/6 to 12/-; Ribstons, 7/6 to 9/6; French Crabs, 12/3 to 13/6.

At Port Said wet Apples, ex "Ballarat," sold at auction at 1/10 per case.

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

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Insecticide and Fungicide
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The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,

Advertising in this Journal.

NEW SOUTH WALES.

Sydney:
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne:
Andrew, Fred. J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
Silbert, Sharp & Davies, Western Market.
Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.

Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.
Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.

London:
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.
Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.
Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers.
Bristol and Southampton:
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.
Glasgow:
Russell, Turnbull & Co.

FRANCE.

Scheiber, E., Paris.

GERMANY.

Bremen:
Fruchthandel, Gesellschaft.
Hamburg:
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

AUSTRALIAN FRUIT IN ENGLAND.

Messrs. M. Isaacs & Sons Ltd., fruit brokers, London Fruit Exchange, Spitalfields, in a letter dated April 9, make some interesting comments regarding fruit then arriving in England.

Victorian Fruit.—Apples ex "Delphic" were immature, with the exception of Gravensteins, which were over-ripe and defective. Cleos. were grass green. Jonathans lacked color. Prices were disappointing.

South Australian Jonathans on the same ship showed good color, and brought satisfactory prices. S.A. Jonathans ex "Comorin" were of good quality and well colored, and brought 13/3 to 15/-. As American Apples, fully matured, were still available in large quantities, buyers paid little attention to immature fruit.

Prices for Victorian Apples realised:—Jonathans, 9/6 to 13/-; Dunn's, 9/- to 10/9; Cox's, 14/9 to 17/6; Cleos., 10/3 to 13/3. A few Cleos. from South Australia affected by bitter pit brought 8/9 to 11/9.

"Moreton Bay" and "Otranto."—The Williams Pears were well advanced and in a treacherous condition. Prices: Williams, cases and flats, 8/9 to 20/6; Packham, 5/- to 6/-; Cap., 8/- to 9/9; Bosc, 9/- to 16/3; W. Coles, 11/9; Jos., 14/6 to 15/-.

Buyers probably lost over these transactions with Pears. The fruit came into competition with South African Pears, which were plentiful.

April 14.—Sir Granville Ryrie, in company with the Agents-General in the different States, officially opened the Australian season by auctioning a lot composed of one South Australian, one Victorian, and one Tasmanian case of Apples. The lot fetched 25 guineas, which was given to charity.

Although the fruit was more mature and of better quality than that earlier shipped, the market weakened considerably. The reason for the fall was that buyers stated they had difficulty in disposing of the "Delphic" cargo, the Cleos. having developed pit. Jonathans lacking color found a slow sale. It was a great pity that the fruit ex "Delphic" was ever shipped.

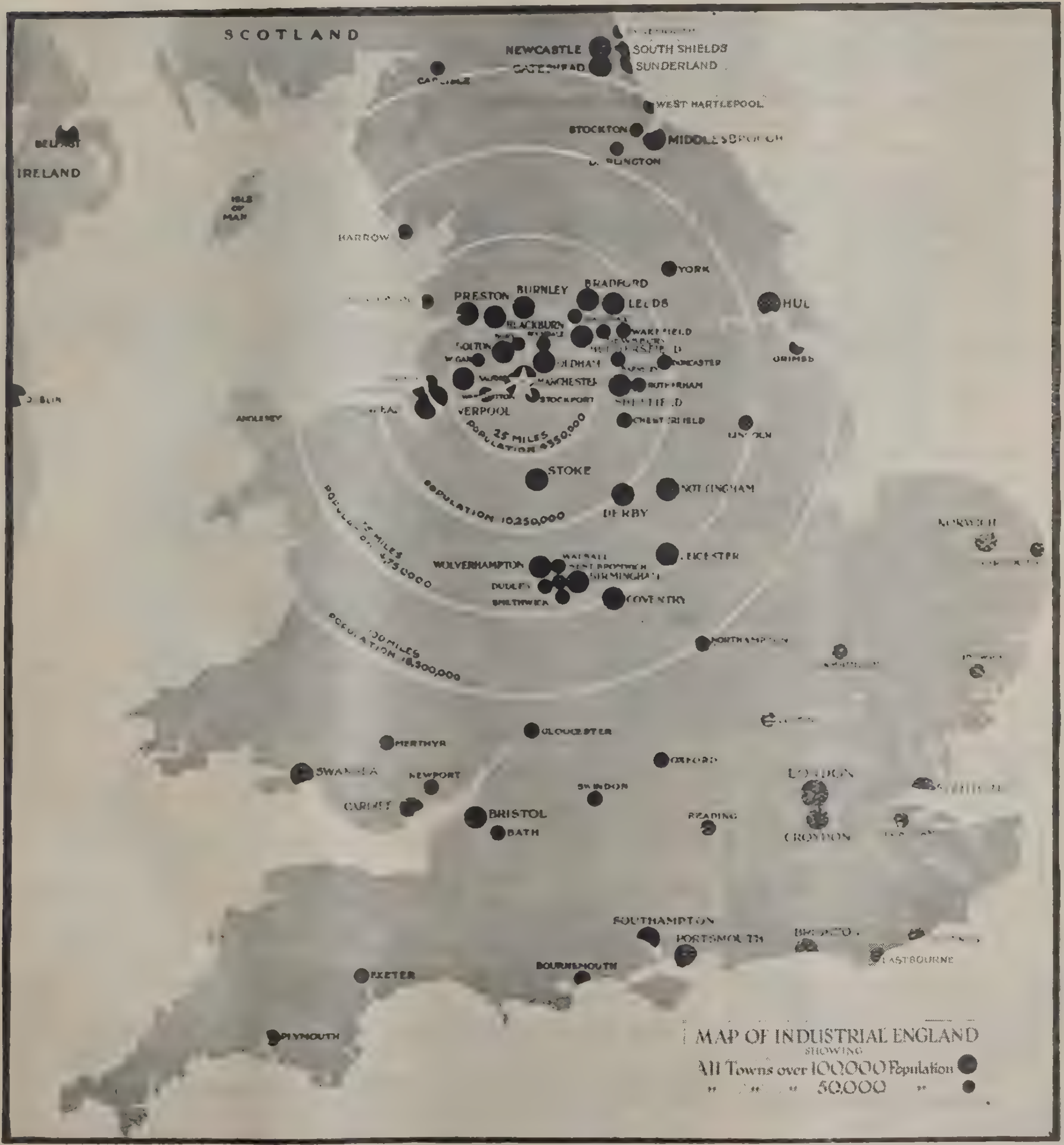
There was a noticeable improvement in the grading and packing of Victorian fruit. The majority of the fruit was packed in the Canadian bushel case, and attractively labelled. Stamped wrappers, in many instances, have also been adopted. Messrs. Isaacs state the fruit must be packed tighter.

London (13/5/30).—Messrs. Barker, Green & Parke Pty. Ltd., Melbourne, are in receipt of the following cables from Simons & Co. Ltd., London:—"Oronsay" Jons., 10/- to 13/-; Delicious, 10/- to 11/-; C.O.P., Romes, Cleos., 10/9 to 12/-. "Hobsons Bay" Jons., 10/9 to 12/9; chiefly 11/6 to 12/-; various 11/- to 14/-; Winchester boxes, 12/- to 15/-.

Liverpool (13/5/30).—Messrs. MacGeorge & Jardine, cabled on May 13, 1930:—The balance of the "Tekoa" cargo, and part of the "Telamon" have been sold, at the following prices:—

LOOK AT THE MAP!

Which Port is the Natural "Clearing House" for all the Principal Manufacturing centres?


SCOTLAND
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DARLINGTON
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IRELAND
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YORK
PRESTON
BURNLEY
BRADFORD
LEEDS
HULL
BLACKBURN
WAKEFIELD
HUDDERSFIELD
BOLTON
WIGAN
OLDHAM
GRIMSBY
DONCASTER
MANCHESTER
ROTHERHAM
DUBLIN
STOCKPORT
SHEFFIELD
LIVERPOOL
ANGLESEY
CHESTERFIELD
LINCOLN
25 MILES
POPULATION 4,350,000
STOKE
NOTTINGHAM
POPULATION 10,250,000
DERBY
NORWICH
75 MILES
WOLVERHAMPTON
WALSALL
WEST BROMWICH
BIRMINGHAM
LEICESTER
DUDLEY
SMETHWICK
COVENTRY
NORTHAMPTON
100 MILES
POPULATION 16,300,000
GLOUCESTER
MERTHYR
OXFORD
SWANSEA
NEWPORT
LONDON
SWINDON
CARDIFF
BRISTOL
READING
BATH
CROYDON
SOUTHAMPTON
PORTSMOUTH
BRIGHTON
EASTBOURNE
BOURNEMOUTH
EXETER
PLYMOUTH
MAP OF INDUSTRIAL ENGLAND
SHOWING
All Towns over 100,000 Population ●
" " " 50,000 " ●

PORT OF MANCHESTER

The Economic Distributing Centre for 12 Million Consumers.

"In the Heart of Industrial England."

Vic.—Jons., 10/- to 13/9; Dunns, 11/- to 13/6; Reinettes, 10/- to 12/6; Cleos., 15/3. S.A.—Jons., 10/- to 13/3; Davids, 10/6 to 12/-.

Cargoes by "Telamon" and "Runic" were sold at fair prices. Tasmanian Apples were in poor condition.

Hamburg.—Messrs. Barker, Green & Parke Pty. Ltd., received a cable from Timm & Gerstenkorn, Hamburg, thus:—

Fremantle.—"Tekoa," 55,200 cases:—Jons., Cleos., Dunns, 10/- to 17/-; Ribstons, Duke Clarence, 10/- to 15/-; C.O.P., Tas., R.P., 12/- to 17/-; Alfristons, 10/- to 13/-; Monroes, 12/- to 15/-; Vic., Jons., 11/- to 15/-; Cleos., 13/- to 16/-; Dunn's, 13/- to 19/-; Tas. Pears. 2,400: Boscs, 20/- to 29/-; Clairgeaus, 18/- to 21/-. All generally lacking color; demand good.

Hamburg.—Messrs. Ph. Astheimer and Sohn, Hamburg, advise under date April 2:—U.S.A. Apples, 49,663 boxes and 310 barrels, offered; prices advanced for boxed Apples. Prices: Winesaps, 138/216's: extra fancy, 12/3 to 13/9; fancy, 11/6 to 12/9; Newtowns, extra fancy, 18/3 to 19/-; fancy, 16/6 to 17/-; C grade, 13/- to 13/9; Ortley (Cleo.), extra fancy, 18/9 to 20/3; fancy, 14/- to 16/9; Rome Beauty, extra fancy, 125/163's, 16/3 to 19/3

Copenhagen.—Mr. H. G. Colombie advises having received a cable from his principals, Kobenhavn Frugtauktioner, dated May 17, as follows:—

The following prices have been realised for Australian fruit, there being a strong demand:—**Victorians:** Cleos., 13/- to 16/5; Jons., Dunn's, 12/- to 15/-; Duke of Clarence and King Davids, 12/5 to 13/-; others, 10/- to 12/-.

Tasmanians: Cleos., 14/- to 16/-; Jons., 12/- to 13/-.

New Zealand.

Dunedin (15/5/30).—Reillys, Central Produce Mart, reports prices as follows:—

Apples, Delicious, 5/-, 8/6; Jonathans, 5/-, 7/6; other desserts, 4/-, 6/-; cooking, 4/-, 6/6. Pears, Winter Coles, 7/-, 9/-; Nelis, 8/-, 10/-; half cases, 2/-, 4/-; other desserts, 5/-, 6/-.

American Valencias, 49/6; N.S.W., 15/- to 20/-; Mission Lemons, 50/-; Grape Fruit, 43/-; Passions, 7/-, 9/-; Bananas, ripe, 30/-.

RIDLEY & HOULDING
Covent Garden Market
LONDON

Specialists in Australian Fruit.

Solicit consignments of Apples, Pears, Etc.

Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

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New South Wales.

Sydney (29/5/30). — Choice red Apples were scarce and in demand. Citrus fruits were still dull, and most fruit changed hands quietly at the ruling levels.

Apples.—Local Jons., 5/- to 9/-; R.B., 5/- to 9/-; few 10/-; Five Crown, 4/- to 6/6; Granny, 4/- to 10/-, few 11/-; jam, 2/-. Tasmanian Jons., 5/- to 9/-; Tas. Prides, 4/- to 8/-; French Crabs, 5/- to 7/-; D.C., 4/- to 7/-; S.P.M. and Cleos., 5/- to 8/- per bushel case. Bananas (genuine grades), special, 28/- to 32/-; choice, 24/- to 27/-; standard, 18/- to 23/-; plain, 12/- to 17/- per case. Citrus: Lemons, local, extra choice, 8/-; choice, 6/- to 7/-; medium, 5/- to 6/-; small, from 3/6. Oranges, common, second crop, 3/- to 5/-; navels, main crop, 4/- to 7/-; Mandarins, main crop, 3/- to 8/- per bushel case. Grapes: Cornichons, 5/- to 6/-; Ohanez, 4/- to 5/- per half-bushel case. Pears: Local, dessert, 4/- to 8/-; Victorian, 2/- to 7/-; Tas. Winter Coles, 4/- to 8/-, few 10/-; W. Nelis, 5/- to 8/-; B.B., 3/- to 5/-; others, from 3/- to 5/- per bushel case. Pineapples, Queens, choice colored, to 14/-; green, 7/- to 11/- per case. Custard Apples, 3/- to 5/- per half-bushel case. Papaws, 10/- to 15/- per case.

Tasmania.

Hobart (31/5/30).—Lady Snows, 2/- to 4/9; Cox's, 2/- to 3/6; Delicious, 3/- to 7/-; Democrats, 4/- to 7/-; Jons., 2/6 to 5/-; F.C., 2/6 to 4/-; S.T.P., 2/6 to 4/6; R.B., 2/- to 3/9; Granny Smiths, 4/6 to 6/-; S.P.M., 2/6 to 4/6; inferior and second grade Apples, 1/- to 2/6 per case. Pears: Very dull, 1/- to 3/- per case. Tomatoes, 3/- to 6/- per case.

Queensland.

Brisbane (29/5/30).—Local Fruit: Oranges, 3/- to 7/- bushel; navels, 6/- to 9/-; Mandarins, Emperors, 5/- to 8/-; Scarlets, 5/- to 8/6; Glens, 5/- to 10/-; Lemons, 15/- to 17/- bushel case; Grapefruit, 2/- to 4/-; Pineapples, smooth 6/- to 7/6 case, rough 5/- to 7/- case. Apples, 4/- to 7/- bushel; G.S., 8/- to 10/-; Custard Apples, 2/6 to 3/6 quarter-case. Imported Fruit: Apples, Tas. Jons., 8/- to 9/- bushel case; T.P., 6/- to 7/6; Cr., 7/-; A.P.M., 6/- to 7/-; Scarlets, 7/- to 8/-; Dukes, 6/- to 7/-; F.C., 7/- to 8/-; S.P.M., 7/6 to 8/6; Alf., 6/- to 7/-; Vic. Jons., 7/- to 9/-; King Davids, 6/- to 6/6; Del., 6/- to 7/-. Pears: Tasmanian W.C., 8/- to 10/-; B.B., 6/- to 7/-; inferior, 3/- to 5/-; G.S., 7/- to 9/-; Vic. Jos., 6/- to 8/-; W.C., 6/- to 7/-; Keiffers, 3/- to 5/-; W.M., 7/- to 9/-.

Western Australia.

Perth (27/5/30).—Apples: Dunn's, dumps, 7/- to 11/-; R.B., 8/- to 11/-; Yates, 10/- to 15/3; Granny, 9/- to 13/-; Cleos., 7/6 to 12/-; Doherty, 7/6 to 12/-; Jons., 8/- to 14/6; others, 6/- to 11/6. Citrus: Navels, flats, 4/- to 8/-, dumps 7/6 to 13/-; Lemons, 3/- to 7/6; Mandarins, 8/- to 14/-. Pears: Pears, consisting mainly of the Josephine and Winter Nelis varieties, were fairly plentiful, and the demand was good. Average market quotations:—Pears, all varieties, flats 3/- to 10/-, dumps 4/6 to 9/6.

Victoria.

Melbourne (30/5/30). — The following wholesale prices, supplied by the Wholesale Fruit Merchants' Associations of Victoria, are those which ruled in the Western Market yesterday for average quality fruit:—Apples: Good to choice eating, 3/- to 5/6; cooking, 2/6 to 4/6. Bananas: Green Queensland, special, 27/-; choice, 26/-; standard, 20/- to 25/-; plain, 16/- to 19/- per double case; rust-affected lines lower. Custard Apples, 5/- to 6/- half-case. Grapes, 3/- to 7/-, few very special higher per case. Lemons, 10/- to 12/- per case. Mandarins, Queensland, 8/- to 10/-. Oranges, common, 4/- to 7/- per case; odd lines higher; navel Oranges, 7/- to 10/-; fruit from some districts brought higher prices. Passion Fruit, 14/- to 18/- per case. Papaws, 12/- per double case. Tomatoes, Queensland, 3/6 half-case.

The Melbourne manager of the Federal Citrus Council of Australia reports that prices were as follow:—Average standard navel Oranges, including Victorian and Murrumbidgee shed packs, 8/- to 10/-; some selected packs higher, including some South Australian packs at 13/- to 17/-. Lemons, 9/- to 11/-, few specials 13/-. Victorian Grapefruit, 13/- to 16/-. Mandarins, 10/- to 12/-; Queensland repacked, to 10/-. Queensland common Oranges, repacked, to 8/-.

South Australia.

Adelaide (29/5/30).—Apples, eating, 3/6 to 4/6 per case, cooking 3/-; Grapes, dark 8/-, white 8/-; Lemons, 14/-; Oranges, common, 10/- to 12/-; Mandarins, 18/-; navel, 14/- to 16/-; Pears, eating, 4/- to 5/-, cooking, 3/-; Persimmons, 14/-; Pineapples, 18/-; Pomegranates, 2/6; Quinces, 2/6; Strawberries, 10/- doz. lb.; Bananas, 30/- crate; Almonds, 11/- doz. lb.; Brazil Nuts, 13/-; Peanuts, 14/-; Barcelona, 12/-; Coconuts, 3/6 doz.; Melons, 5/- cwt.

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Insect Pest Control.

Codlin Moth.

Examine bandages on fruit trees and dip same in boiling water to destroy larvae and pupae of codlin moth. The bandages should then be replaced and examined from time to time during the next few weeks. Pick up and destroy all fallen Apples. Scrape off all loose bark and examine crevices of trees for codlin moth grubs.

Looper Caterpillars.

The greyish-colored loopers are very numerous this season. They are usually found attacking the fruit spurs of Apple and other fruit trees. Spray with arsenate of lead.

Pear-leaf Blister Mite (Phytoptus).

When Pear and other fruit tree leaves have been attacked by these mites, it is advisable to rake up all the fallen leaves and burn same. The trees should be sprayed during the winter with lime sulphur.

Light Brown Apple Moth.

See "The Fruit World," April 1, 1930, p. 157.

Painted Apple Moth.

The tufted caterpillars of this very destructive moth, are still in fair numbers on Apple and other fruit trees. They do much damage to the fruit spurs. Spray with arsenate of lead.

Scale Insects.

Trees infested with san jose, greedy, Apple mussel, olive or black scales, should be sprayed with any of the white oils, 1 in 40. It is best to spray in the winter, after pruning.

Cherry Aphids.

These are exceedingly destructive insects, and often cause Cherry trees to die. They swarm on the young growths, causing same to turn black and shrivel. Spray in winter with lime sulphur or any of the white oils, to destroy the black bead-like eggs.

Peach Aphids.

Use similar sprays as recommended against Cherry aphids. Winter spraying is recommended.

Pinara or Snout Moths.

These greyish-colored caterpillars are exceedingly plentiful on young Apple trees this season. Their color closely resembles the bark, and they are somewhat difficult to detect, though the damage to leaves and fruit spurs is very noticeable. Use arsenate of lead sprays.

Red Spider and Bryobia Mite.

See "The Fruit World," April 1, 1930, p. 157.

Citrus and Deciduous Trees.—We are advised by Messrs. F. Ferguson & Son, of the Australian Nurseries, Hurstville, N.S.W., that they have a large stock of citrus and deciduous trees, Roses and all sorts of other hardwooded ornamental trees. All their citrus are raised on new land, and they claim that they have a good fibrous root system. This firm has limited quantities of Valencia trees available from the New South Wales Bud Selection Society's selected wood. All enquiries will receive prompt attention.

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ELECTRICAL GARDENING.

SWEDEN now has 300 electro-horticultural establishments and a special institute and laboratory for scientific research work.

The use of electricity in horticulture and the successful experiments already made, open up a new epoch to the horticulturists and will make them increasingly independent of seasonal and climatic changes, according to Professor Sven Oden, a leading Swedish expert of electro-horticulture. In this branch of research work Sweden now is the international leader, said the professor, thanks to energetic experimenting and to the generous assistance of the Government.

In spite of the fact that Sweden is at present ice-bound and in the grip of an intense cold spell, there are home-grown luscious Raspberries to be had at the Government experimental gardening headquarters near Stockholm. Summer flowers are there to be seen in full bloom, and the King on his Christmas table had fresh and delicious Cucumber, raised by electricity.

Electricity is used partly for heating the earth and partly as a substitute for sunlight. The earth-heating problem has been definitely solved and proved to be economic in practical use. For instance, in the experimental garden of Homlingby, near the city of Gevle, 10,000 Tulips, 1,500 Lilies of the Valley, and 1,500 Hyacinths were electrically raised in the month of January, and the cost of the electric current used was found to amount to about 1 per cent. of the commercial value of the bulbs.

The use of electric lighting as a substitute for sunshine is still in the experimental stage and presents a more intricate problem owing to the great difference and varying sensitivity of the plants to different kinds of light, but here also important and highly promising results have been obtained.—"Horticultural Advertiser," Eng.

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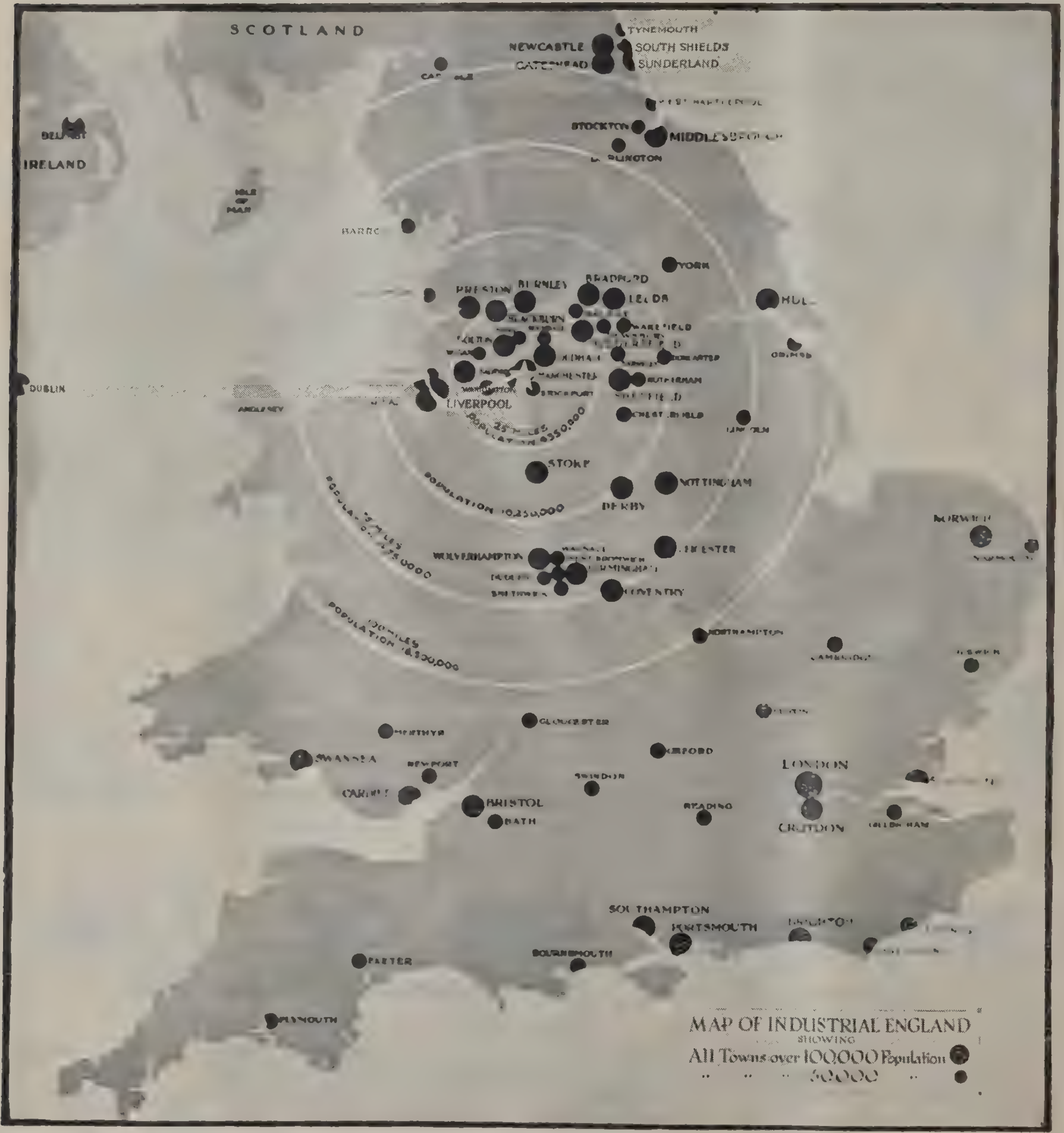
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Read what the grower says!—

—From R. E. Fowler, Pomonal, Vic., Apple Export Blue Ribbon Winner:

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Read what other growers say!—

—From J. H. Feltham, Bamawm Extension, 30/4/30:

"Regarding results from the VOLCK spraying, they were very satisfactory. I had William Pears 95 per cent. clean against 75 per cent. codlin rejects last year."

—From R. K. Bazley, Ardmona, 17/2/30:

"I might state that I had splendid results from VOLCK, both as a check for red spider and codlin control."

—From J. W. Lindner, Wangaratta, 19/4/30:

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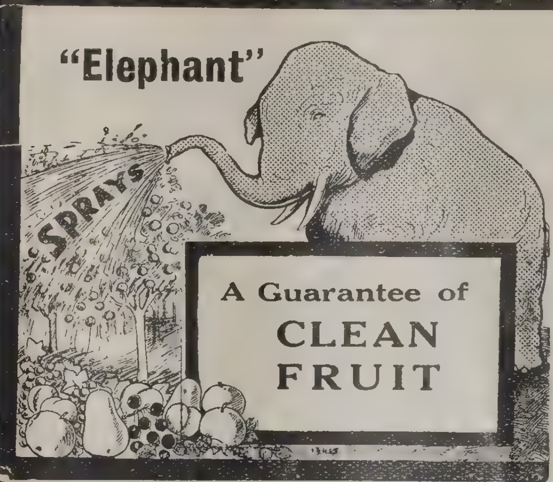

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"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

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Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers' MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

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IT ALL DEPENDS.
LADY ASTOR ALWAYS AHEAD.

Viscountess Astor always gets back at people. I heard her making an election speech in Plymouth once.

"'Don't you wish you were a man?' a young fellow yelled.

"'Don't you?' said she, and went right on with her argument.

"The young fellow thought a while. Finally he thought up something good. O, very good.

"'Hey,' he yelled again, 'don't you think mothers ought to stay home with their children?'

"'I think,' said Lady Astor, 'that children ought to stay home with their mothers,' and she went right on with her argument again."—"London Times."

Magistrate: "I cannot conceive a meaner, more cowardly act than yours. You have left your wife. Do you realise that you are a deserter?

Rastus: Judge, if you knew dat lady as well as I does, you wouldn't call me no deserter. Judge, I'se a refugee.

Pruning Deciduous Fruit Trees.

The Apricot, Peach, Nectarine, Plum and Cherry.

(By P. H. Thomas, Tasmania Chief Horticulturist.)

Reproduced by courtesy of the Tasmanian Department of Agriculture, being a reprint of their Bulletin No. 5 (new series.)

IN DECIDUOUS FRUIT CULTURE there is probably no subject which is responsible for so much controversy as pruning. Fruitgrowers who have the opportunity of visiting orchards in other producing centres will find that many different systems are practised. These have been adopted for varying reasons, being induced by such factors as climate, soil, and market requirements.

However, whilst methods may differ, it will generally be found that satisfactory results are obtained in quality and quantity of the crops harvested.

The writer has touched upon these comparisons to show the danger of laying down set rules for the conduct of this operation. No doubt there are methods particularly suited to certain varieties of fruits to which basic rules for treatment may be generally applied. It is often necessary, however, to depart from these in different districts or under varying conditions of growth and treatment, in order to bring about the desired objects.

The pruning of fruit trees is carried out for several reasons:—

(a) To train the tree in its growth, so that the framework will be sturdy, evenly balanced, and symmetrical, and enable it to bear heavy crops of fruit.

(b) To encourage and control the formation of fruit-bearing wood.

(c) To facilitate harvesting, cultivation, spraying, and the different orchard operations.

(d) To improve the quality and quantity of fruit, and also induce more regular cropping.

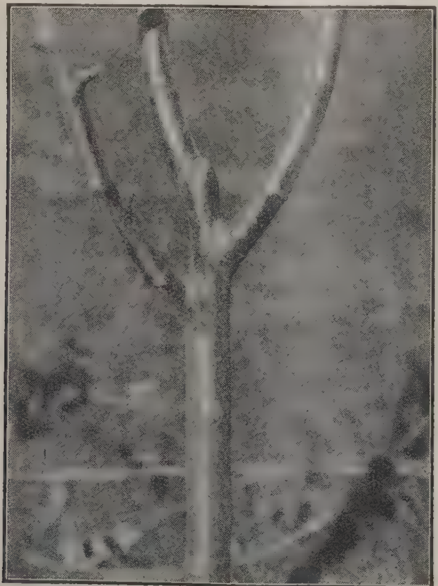
Shaping the Tree.

This is a very important operation. Once the tree is pruned it is generally difficult, and often impossible, to correct mistakes that have been made in the early stages of growth.

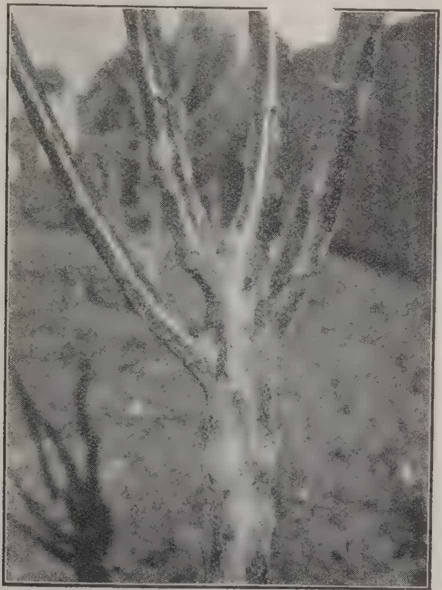
In shaping the young tree during the first few years of its life, the foundation is being laid for the future framework. The principal mistake that has been made in many orchards in this respect has been an inability to visualise far enough ahead.

This is especially noticeable in the first two or three years' pruning. If the orchardist would consider how this work will fit in with the order and development of 10 to 15 years hence, many mistakes would be avoided. The favored type of tree for most deciduous fruits grown in Tasmania is that of the low, open-headed order known as the "vase shape." This is particularly suited to the climate, as it ensures that the maximum amount of sunlight reaches the fruits, giving good color and reducing the danger of fungus infection.

Trees are generally received from the nursery either as what are known as "straight rods" (yearlings) or branched "two-year-olds." During recent seasons, with heavy crops, a large number of trees have been seriously injured by the main limbs splitting or breaking off at the "crotch." This has been brought about by weakness, caused by the branches being set so that the strain comes practically at one point. When a "yearling" tree is cut



Shaping the Tree: A well-developed "crotch" making a good foundation for the framework.



Shaping the Tree: A poorly developed "crotch." The strain on the main limbs is all at one point, and likely to cause splitting.

back with the object of forming the main branches, every care must be taken to develop these so that they are advantageously placed to form a good "crotch," and incidentally a strong foundation for the future tree.

The aim from then onwards should be to build up a strong framework, shortening the leaders according to the desired direction of growth.

Varieties that are known to be of spreading habit should be encouraged to develop an upright growth, whilst those that are inclined towards an upright habit should be trained as horizontally as possible.

When shortening the annual growth of the leaders, particular attention should be paid to the position of the buds chosen as terminals. The resultant growths will develop in the direction these are pointing. Allowance must also be made for the effects of wind, and it may be possible to employ artificial methods, such as short braces, to secure the best disposition of the limbs. For the first two years it is generally necessary to cut back the "leaders" fairly hard in order to secure the desired number of vigorous main limbs. After this the annual shortening need not be so drastic. Hard cutting, practised over a number of years, will ultimately tend to stunt the trees, and should be avoided if a healthy development is to be assured.

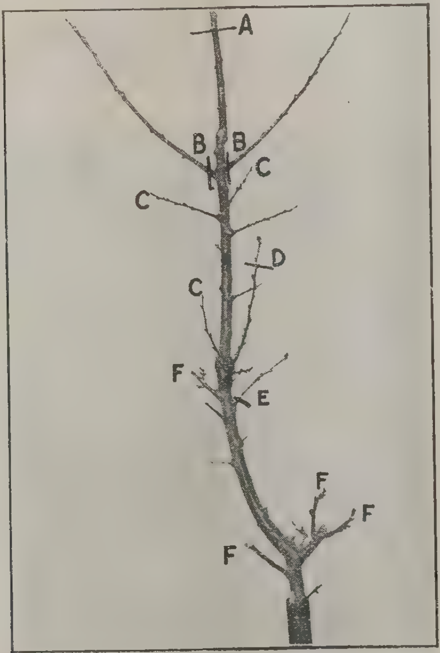
Apricot.

THE FRUITS ARE BORNE upon wood of the preceding year's growth, and upon the short spurs which form on the main limbs.

Vigorous laterals at the head of the tree should be entirely removed. These will be replaced the following year by lighter growths which will lend themselves more readily to treatment.

Light laterals, up to about 12 inches in length, should either be left untouched or just "tipped" to stimulate bud development. This class of wood, if handled in the right manner, is most valuable, and generally carries a large proportion of the total yield.

Longer and more vigorous laterals in the body of the tree may be shortened back to about a third of their length. This will have the effect of developing the lower buds on the portion retained into short fruiting spurs, and



Apricot: Suggested treatment:—Leader shortened to A to promote vigorous growth and development of laterals. Secondary growths removed at B. Light laterals left unshortened at C. Lateral tipped at D. Barren lateral removed at E. Laterals treated during preceding year, showing fruit bud formation (F). (Moorpark.)

Shaping the Tree: Second year. Showing development of "main leaders." (Apple, Tasma.)

Apricot: Showing a good development of fruiting wood after receiving suggested treatment. (Moorpark.)

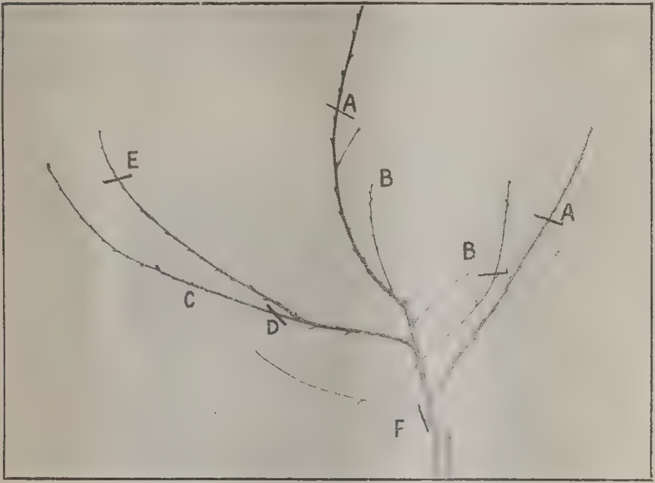
forcing the growth of two or three light laterals which will fruit the following year. When any type of fruiting branch shows signs of age, becoming barren or unfruitful, it is a good policy to remove it.

In a healthy growing tree receiving an annual pruning and shortening of the leaders, these will be replaced by new virile growths, which may be subsequently treated in the way detailed for first-year laterals. The aim of the operator should be to encourage

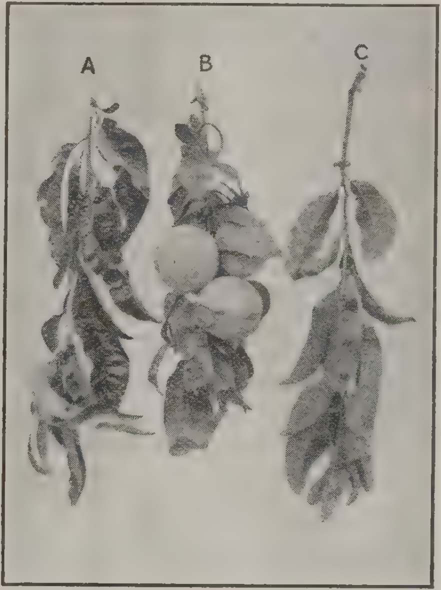
a good annual supply of new wood.

By carefully thinning, shortening, and cutting out old and barren growths this should be assured.

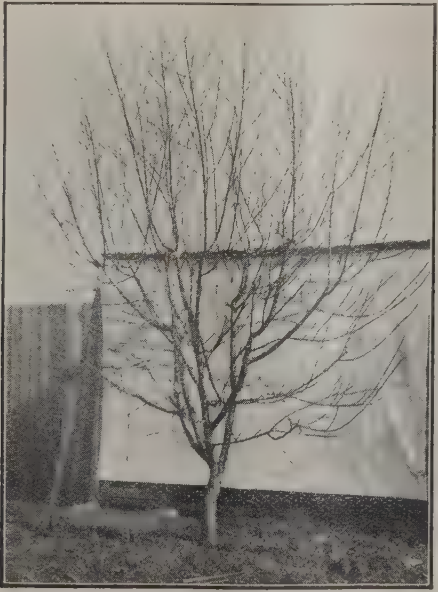
At different periods it may be necessary to remove large limbs for certain causes. Stress is laid on the



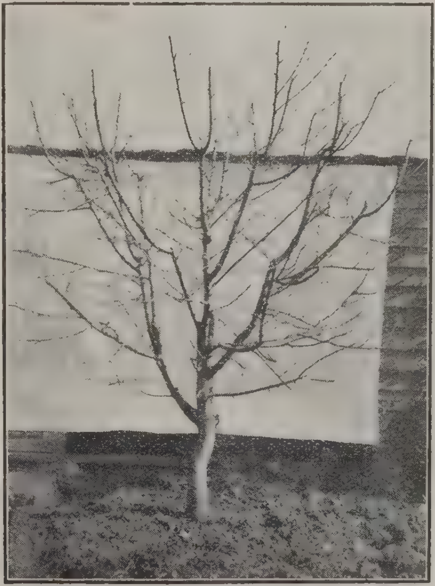
Peach: Suggested treatment:—Strong fruiting wood shortened at A to stimulate setting of fruit and development of new wood for ensuing year. B. Weak laterals left unshortened. The lateral on the left was shortened at C the preceding year; it has borne fruit and forced out new wood; the old or weak wood is removed at D, retaining the new growth, which is shortened at E. F. Barren laterals, which should be removed.



Peach: Fruiting wood. A. First year. B. Second year. C. Third year.



Peach: Vigorous growing young tree before pruning.



Peach: The same tree as in previous photo. after pruning.

necessity of cutting these cleanly and close into the main limb, and coating the wound with an antiseptic such as coal-tar or white zinc mixed with linseed oil.

Apricots are very subject to a form of "die-back." This is being investigated, but it is noticeable that it is more prevalent where very hard pruning has been annually practised. Pruning should be commenced as early as possible after the growing season. Recent observations have shown that if this is performed early (about the end of April), the cuts heal over more quickly, as at this period sufficient sap is left in the tree to "callus" or seal the cuts before growth ceases.

Peach and Nectarine.

THE PEACH, similar to other fruits, requires annual pruning, if a sturdy and robust tree is to be built carrying regular crops of good-quality fruits.

The first two or three years will be devoted towards shaping a strong framework, a fairly low, open-headed tree being desirable.

Peaches and Nectarines also bear their fruits on the wood of the preceding year's growth, and it is important that an annual supply of this should be encouraged and stimulated throughout the tree.

An examination of the tree in the third or fourth year will show that a number of types of wood are present. These will need different treatment. Along the main limbs a number of laterals will have developed. If they are too crowded, a few (the strongest for preference) can be shortened back to the second or third bud from the main leader.

Each one so treated will throw out one or two lighter growths, which will bear fruit the following year when the laterals that have been retained have fruited.

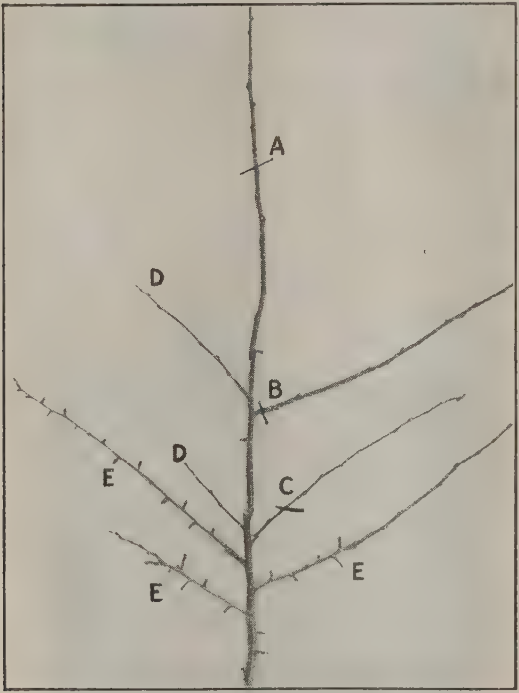
Long laterals which are inclined to become barren require to be shortened back, either to the main limb or to a convenient new growth. This will encourage them to "break" new wood on the portion retained, which may be treated the following year as desired.

It is a general practice amongst some growers to "tip" the ends of all laterals retained, with the object of stimulating **the development of new wood** for the following year.

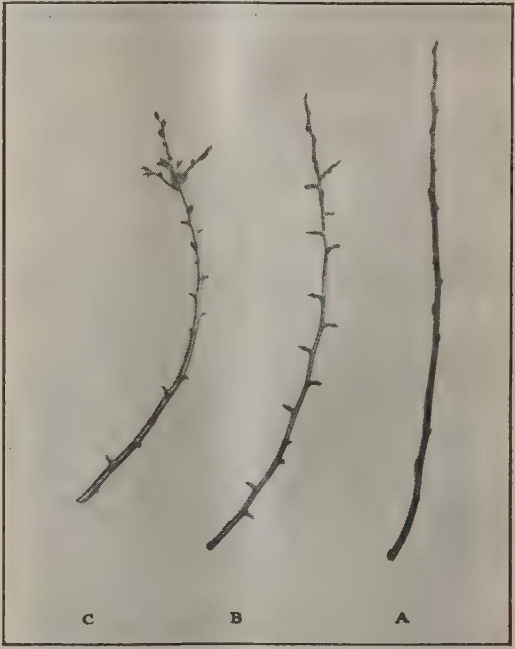
This may be carried out with satisfactory results as long as the variety is not a terminal bearer. Some Peaches bear their fruits almost wholly on the ends of the laterals, and the removal of this wood will seriously affect their cropping. In such varieties an alternate system of thinning is suggested.

Trees that have reached an advanced age, and are inclined to carry a large proportion of semi-barren wood, generally require de-heading in order to promote a vigorous growth. Such cases require the leaders to be shortened well back into the old matured wood (about a third of the whole growth being removed). In carrying out this operation it is always advisable to cut back to a healthy lateral carrying leaf buds, rather than the indiscriminte shortening that is sometimes practised.

By practising the methods described, and with judicious and intelligent treatment, cutting out wood that has borne and finished fruiting; shortening some of the new wood,



Plum: A. Leader shortened at A. B. Strong lateral removed at B. C. Lateral, replacing growth removed previous year, shortened at C, to force two laterals, which will be retained intact the following year. D. Light laterals retained to develop fruiting branches. E. Showing fruiting laterals developed from different classes of wood. These are removed when becoming barren. (Coe's Golden Drop.)



Plum: Evolution of a fruiting lateral—A, first year; B, second year; C, third year. When reaching the latter stage it is advisable to remove the lateral, as it has become almost barren, and, if cut out, will be replaced by a new growth.

so that it will develop growths that will be of service during the ensuing year; maintaining a proportion of new laterals for fruiting during the coming season; and keeping a good check upon the "leaders" to stimulate the development of new wood—it should be possible to ensure a good annual supply of fruiting wood throughout the tree.

Plum: Tree pruned to develop early cropping. Note laterals, which will bear the bulk of the crop. (President.)

Plum: Prune variety, showing abundance of fruit spurs and laterals. These will require thinning the following year. (D'Agen.)

The Plum.

PROBABLY there is no species of fruit that receives such unsatisfactory treatment as the Plum. A large number of fruitgrowers will prune all the other fruits in the orchard, and when they come to a Plum tree, will either let it go unpruned or else make it the subject of such an attack that it will be shorn of a great proportion of its fruiting branches.

If left to its inclinations, the tree will bear well enough for a few years, but will ultimately carry a large quantity of dead or barren wood, producing fruits of a small and unremunerative type. A large number of varieties, such as Coe's Golden Drop, President, and Jefferson, particularly require careful pruning.

The majority of fruits are borne upon the lateral wood, which has the habit of becoming barren after producing a crop. In order to safeguard against this, it is necessary to encourage the development of sufficient new lateral growths each year.

Laterals, particularly those of medium growth, should either be left "unstopped" during pruning operations, or, if more than the required number are present, be thinned and shortened back to the second or third buds from the main limb.

Most of the Plums of the European type require two years to develop their fruit buds. This should be kept in view when pruning these varieties.

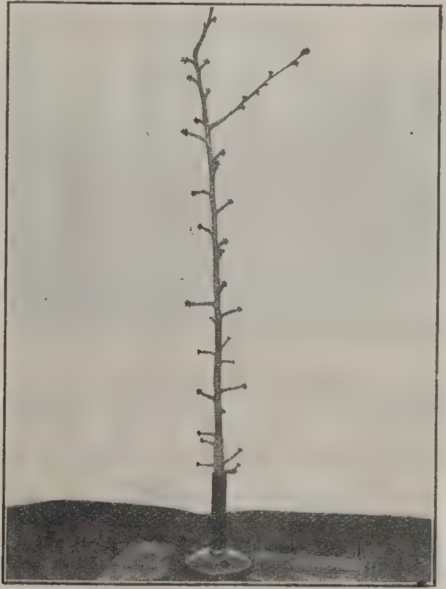
Trees that have received the recommended treatment from planting will each season present the following pruning to the operator:—

(a) The thinning and shortening of unrequired new laterals.

(b) The removal of barren or semi-barren laterals.

(c) The shortening of leaders to frame the tree and stimulate new lateral development. (Fig. 27.)

These are the general principles which may be employed in pruning most Plums of the European type. Certain prune varieties, such as D'Agen, Blue Imperatrice,



Cherry: Section of sweet Cherry, showing spur-forming habit. These can be retained for a large number of years, and remain vigorous and healthy. (Big. Napoleon.)

and Fellemberg, together with a few Plums of the European type, furnish their fruiting spurs and branches much more readily, and without such hard pruning. These require only a general thinning each year to prevent the spurs becoming too crowded.

The Japanese species are of an entirely different habit, and bear their fruits in a similar manner to the Apricot, viz., on short spurs and wood of the preceding year's growth. The suggested treatment detailed for the Apricot may be applied to such varieties with satisfactory results.

The Cherry.

CHERRIES MAY BE GROUPED into two distinct species. The sour varieties, such as Morello, Montgomery, May Duke, and Kentish, and the sweet kinds, like Bigarreau Napoleon, Florence, and Bedford Prolific. These have different characteristics of growth, the former being of a pendulous, drooping habit and the latter generally upright and vigorous.

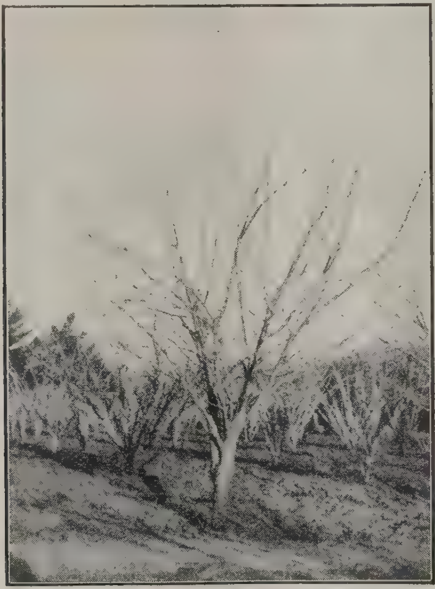
The young Cherry tree is framed in the same way as other fruits, shortening the leaders in the early years of its growth to build in from ten to twelve strong main limbs. When this object has been achieved it is desirable that the main leaders remain unstopped, and only to practice a very light pruning by thinning out crossed or unnecessary limbs.

The sour varieties, which are generally inclined to develop laterally, will require careful attention in the younger stages of growth if a vigorous tree is to be produced. This may be attained by careful selection of the annual buds when framing the tree, it being generally necessary to cut to an inside placed bud in order to induce an upright growth.

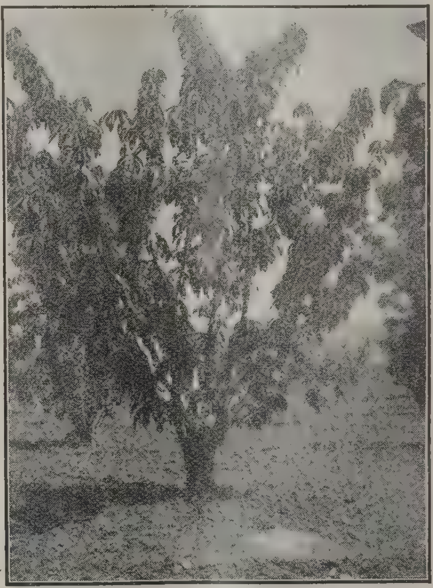
Most Cherry varieties bear their fruits either on short spurs, which yearly develop new buds, or on the lateral growths which break from the main limbs.

Except in the case of diseased or barren growths, these should not be interfered with, as they will continue to grow and bear fruits over a long period. Cherries are very susceptible to gumming, and care should be taken to carry out any necessary pruning operations at a time when this danger is lessened. Experiments show that trees which are treated in the early autumn are not nearly so subject to this trouble as trees which have been pruned in the winter or early spring, the cuts made in the autumn healing quicker, and being made at a period when the trees retain sufficient growth to callus and heal more satisfactorily.

(To be Continued.—Apple and Pear pruning will be described and illustrated next issue.



Cherry: Sweet variety, showing unstopped leader system of pruning. Some of the branches require thinning where crossing or becoming too crowded.



Cherry: Unstopped leader system of pruning. Note even spacing of limbs. (Florence.)

NEWS IN BRIEF.

As the Victorian Department of Agriculture recently lost the services of two experienced packing instructors, fruitgrowers are asking that this important branch of the service be brought up to normal strength and extended.

The Victorian Fruit Marketing Association is very active on behalf of the growers, and has already performed services of great value to the industry.

South Australian producers have proved the value of orderly marketing with citrus, Tomatoes, and Celery. Their success points the way for other sections of the industry to do likewise.

The South Australian Fruitgrowers and Market Gardeners' Association has risen from small beginnings a few years ago to a position of power on behalf of the growers. The General Secretary (Mr. W. J. Kimber) is highly esteemed.

N.S.W. Fruitgrowers' Federation.

Annual Conference, Sydney, June 18—20 ∴ Protest Against Increased Timber Duties ∴ Important Matters Discussed.

THE ANNUAL GENERAL CONFERENCE of the Fruitgrowers' Federation of N.S.W. was held at Sydney on June 18 to 20, General J. Heane presiding over a large attendance.

The report by the Secretary (Col. E. E. Herrod) detailed the year's work. A summary is as follows:—

Citrus Import Prohibition.—The Federal Government had been urgently requested to totally prohibit the importation of citrus fruit on account of the danger of introduction of pests and diseases. Practically every disease and insect pest in Australia had been imported. The Commonwealth now produced more than sufficient citrus fruit, including Lemons, for all local needs. Abnormal plantings of recent years, mainly on soldier settlements, necessitated the finding of export markets. America was closely protected. Italian methods of combating Mediterranean fruit fly were primitive. A temporary embargo was secured, and representations were being continued to have the embargo made permanent.

Farm Produce Agents Act.—An Amending Bill was being introduced. Agents were seeking an increase of commission, but this was opposed by the Board.

Export.—As a result of experience with exporting fruit to Manchester, Hull, and London, the Department recommended:—The Canadian standard case, corrugated cardboard instead of woodwool, oiled wrappers, colored labels, and the marking of the number of Apples instead of size measurement.

Information of great value was expected from the experimental shipment of 35,000 cases of Apples, Pears and Grapes to Hull this season.

Insectarium.—The Department of Agriculture hoped to establish an insectarium on the Murrumbidgee irrigation area for the distribution of beneficial parasites.

Fruit Fly.—The failure on the part of growers to observe the regulations was stated by the Department to be the cause of the spread of the pest. An entomologist was now stationed at Bathurst to study the pest.

Drying Fruits.—Under the Pure Food Act, it was now permissible to allow 14 grains sulphur dioxide to the pound instead of 7 grains previously. Further tests were being made in drying Apricots and other fruits.

Citrus Matters.—Efforts had been continued to have the regulations altered to provide for the total disfigurement in the "special" grade to be ¾ inch in diameter, and for 1¼ inches in the "standard" grade, but without success, as it had not been possible to secure the support of Victoria and S. Australia. Uniform modified interstate regulations were being sought regarding maturity tests for Oranges.

Special efforts were being made by the Federation, the Central Citrus Association, and the Railway Department to get rid of the glut of second crop Oranges.

Selected buds of Valencia Late Oranges had been distributed to nurserymen, and trees were available.

Fruit Producers Co-operative Ltd.—The formation of this co-operative organisation, which is now about to apply for registration, will be the first union registered under the Co-operation Act. The union is an amalgamation of the Irrigation Co-operative Societies Ltd., the Young District Producers' Co-operative Association Ltd., and the Batlow Packing House and Cool Stores.

Duty on Imported Shooks.—The Federation had protested against the sudden and substantial increase in duty on case shooks. Local timber interests desired increased duties and that the drawback on re-export be abolished: further, that the importation of spruce boards be prohibited. The Federation was fighting for the growers' interests.

Market Representative.—Mr. P. S. Macdermott had been appointed market representative, and good results had accrued. Important statistics were being compiled. During the past summer fruit season a sales depot had been successfully established to avoid gluts and to get rid of fruit on Fridays that would be bad by Monday.

Obituary.—The Board desired to place on record an appreciation of the fine services of the late Mr. H. S. Wark, a Council member: his work had been of a very high order.

Amendments were sought in the Apple and Pear grading export regulations. The Department of Agriculture had appointed Mr. Allman to study the codlin moth at the Bathurst Experiment Farm. Manurial tests were being conducted: a census of fruit trees was being taken. A fruit products laboratory on the irrigation area was contemplated. The Government had promised to introduce a Bill to compel manufacturers to guarantee purity or effective strength of sprays. Marketing and cold storage experiments were being conducted with Apples, Pears, citrus, Grapes, Prunes, etc., from Government experiment orchards.

Crop estimates were being obtained by the State Marketing Bureau. By co-operation with the Australian Oversea Transport Association economies in fruit carriage were being effected. With regard to fruit juices, every effort was being made to secure a larger use of pure fruit.

Sale of Fruit by Railway Department.—The development of the fruit selling campaign by the Railway Department is extremely satisfactory. Large quantities of fruit are now being sold through this channel. Last year sales reached 84,000 cases and over 500,000 cartons of Prune and Raisin sweets. There can be no doubt that this total will be exceeded this year, and the Railway Department is to be commended for its valuable work in this direction.

Appreciation was expressed to the Minister for Agriculture, the Under-Secretary, Department of Agriculture, the Director of Fruit Culture and other officers of the Department of Agriculture.

The report was adopted.

* * * * *

Finance.—The auditor's report showed total receipts for the year £3,831, and expenditure £3,418. The balance-sheet showed the cash assets of the Federation to be £1,577. The orchard registration fund stood at £1,730, as against £1,180 last year.

The report was adopted.

The Minister for Agriculture (Hon. H. V. C. Thorby, M.L.A.), said the Government appreciated the importance of the industry and its difficulties. Biological and entomological problems were being studied to eradicate pests and diseases. The new research laboratory at the Hawkesbury College had cost £18,000. In New South Wales there were seven experimental farms paying attention to the fruit industry. At the new 24-acre experimental farm at Bathurst new lines of research were being explored. The Department was also studying cold storage methods and the planting of late and early crops to spread the marketing abroad.

American Methods.

A summary of the report by Mr. J. W. Blick (published in the "Fruit World Annual") was presented with the Secretary's report. In a further statement Mr. Blick said that while fruit was being marketed individually in Australia, America marketed in large groups such as the "Sunkist" Association, which comprised 11,000 growers. Americans were pushing their fruit all over the world—New Zealand and Australia included. New Zealand should logically get her citrus from New South Wales. Australian navel Oranges were better than the Cailfornian, and would command a world market if packed and handled better.

Mr. Cowlishaw (Mangrove Mt.) said New South Wales would ship 1,000 cases of citrus on every New Zealand boat during the coming season. They hoped to gain control of the N.Z. market and oust American fruit.

Rough Handling.

Several delegates stated that the recent special shipment to Hull had been roughly handled, and produced photographs in support of their statements.

A resolution was carried, asking the Railway Department, carriers and fruitgrowers to co-operate to secure more careful handling of fruit.

Mr. H. B. Harris, Assistant General Traffic Manager for N.S.W. Railways, expressed the willingness of the Commissioners to co-operate with the growers for better handling. The major part of fruit handling, however, was not done by the railway staff.

Organisation in Queensland.

Mr. W. Ranger, manager of the Committee of Direction of Fruit Marketing, Brisbane, said that on a recent ballot a majority of 87 per cent. of the growers voted in favor of continuing the present compulsory organisation system. The organisation was really a charter given by the Government to enable the growers to work out their own salvation. Gluts had been eliminated by organised supplies to canneries. New methods of ripening and transport would revolutionise the Banana industry.

With regard to the sale of fruit drinks, Mr. Ranger said his Committee gave a Certificate of Warranty to shops which complied with specific conditions. The public are learning to visit the shops displaying certificates, but those shops not having certificates were being avoided. Thus the public was getting pure fruit drinks, and the industry was benefited.

Is the Fruit Fly a "Bogey"?

Mr. W. B. Gurney, Government Entomologist, said the fruit fly was not the grave danger some people imagined. It was a bogey exploited by various persons and the press. In the worst season the fruit fly was responsible for only 5 per cent. of the damage caused.

Mr. R. A. Jackes (Armidale) expressed surprise at the Department's attitude. The fruit fly was not a bogey. He had seen a consignment of Oranges 75 per cent. affected by the pest. The United States Government had recently allocated 4 million dollars for research purposes.

Bandaging for Codlin Moth.

The regulations for the compulsory bandaging of trees to assist codlin moth control were adversely commented on, and the Department was requested to eliminate the compulsory bandaging regulations subject to the discretion of the orchard inspector.

Timber for Fruit Cases.

The unsuitability of local hardwoods for fruit cases was emphasised. Freight charges were high, and there was considerable loss owing to shrinkage. Further, the cases and the fruit became discolored and extra expense was incurred in working and nailing because of the hardness of the timber. The conference by resolution emphatically protested against the recent increase in duty on imported shooks for fruit cases. The Board was instructed to continue representations to the Federal Government for the removal of the increase of duty on Canadian timber.

Fruit Stealing.

Several delegates spoke of serious losses through fruit stealing, motor-lorries being driven to orchards, loaded up and driven away before the offenders could be caught. Hundreds of tons of fruit were stolen annually in this manner. There was great difficulty in securing convictions, as fruit stealing was looked upon with a certain amount of tolerance. A motion was carried unanimously requesting that fruit stealing be treated on the same level as sheep stealing, and that where the offender was above 18 years of age the penalty should be imprisonment without the option of a fine.

It was decided that every fruitgrower registered under the Orchard Registration Act should automatically become a member of the N.S.W. Fruitgrowers' Federation and vote accordingly.

Export Grading Regulations.

Mr. A. E. Herring (Batlow) said the export regulations were more rigid in Australia than in U.S.A. The Government had been badly advised in drafting the regulations. An alteration was desired bringing them into line with the world's standards. A motion was carried protesting against the elimination of "plain" grade as from January 1, 1931, also that the conference viewed with apprehension the action of the Government in introducing grading regulations without consulting established fruitgrowers' organisations.

"Fruit" Drinks Worse Than Alcohol.

The manufacture of certain synthetic "fruit" drinks was citicised. The delegate stated that some so-called "fruit" drinks were more harmful than alcohol.

It was resolved that efforts be continued to secure amendments to the Pure Food regulations in order to secure the greater use of fruit in fruit drinks.

Importation of Foreign Fruit.

Resolutions were carried requesting the total prohibition of the importation of all foreign fruit; further that all such fruit carried by passenger steamers should be dumped within the three-mile limit.

Protection was requested against the importation of any commodities prepared from fruit or vegetables.

Commercial Alcohol.

It was decided by resolution to ask the Federal Government to offer a substantial reward to encourage the production of motor spirit and other primary products.

Queensland Compulsory Organisation.

Mr. T. A. Tester (Young) moved that an investigation be conducted into the Queensland system of fruit control, with a view to its adaptability in N.S.W. Carried.

Hail Insurance.

Mr. A. U. Tonking (Orange) presented the sub-committee's report on the subject of hail insurance. He said that the committee had been impressed by the fact that even after protracted negotiations, the associated insurance companies were disinclined to enter into this phase of insurance except under such unusually high rates as practically to preclude growers from insuring their crops. It was therefore suggested that a fund be raised to be known as the "Hail Insurance Fund" by the payment of one penny per case on all Apples and Pears marketed by the grower. Only those who thus subscribed would be entitled to have a claim. Further, the Federation should subsidise the fund to the extent of £500, such amount to be repaid when the fund was sufficiently in credit. All claims by growers who had suffered from the effects of hail storms should be investigated by a committee. The scheme could, in time, be extended to include other fruits, as was considered desirable. The report was adopted.

It was decided that next year's conference should be held in Sydney.

Poultry for the Fruitgrower.

(By P. Rumball, Queensland Government Poultry Expert, Reprinted from the "Queensland Agricultural Journal")

THE combination of fruitgrowing and poultry-raising presents several features of economic importance. Fowls in the orchard obtain a good deal of natural food and help to maintain the orchard in good condition, thereby reducing the cost of production of both the fruit and the egg.

The advantages of the combination may be set down as follows:—

(1) Keeping down weeds.
(2) Keeping down many insect pests.
(3) The manurial value of poultry ranging in an orchard.
(4) Additional financial returns.

From the illustrations used in this the absence of weed growth will be noticed. This is not due to intense cultivation that is generally necessary, but to the presence of poultry. The owners of the farms where these photos. were taken assured the writer that before they kept fowls they were constantly cultivating, and that now cultivation was only practised to loosen up the soil for the conservation of moisture. The keeping in check of weed growth means a good deal to the orchardist, while to the fowls it serves as an article of diet which is highly necessary for the maintenance of good health.

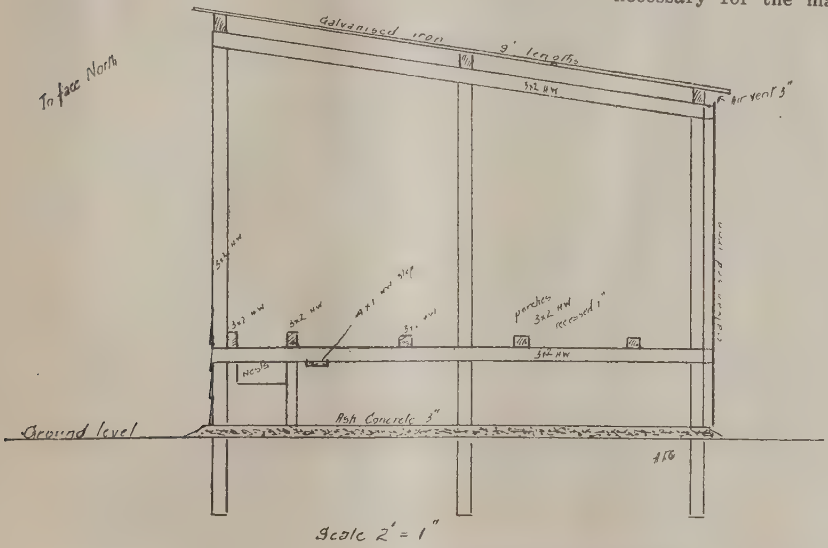

To face North
Galvanised iron 9' lengths
3x2 HW
Air vent 3"
3x2 HW
3x2 HW
3x2 HW
4x1 HW step
3x2 HW
perches 3x2 HW recessed 1"
3x2 HW
Nests
Ash Concrete 3"
Ground level
AEG
Scale 2' = 1"

Fig. 1.

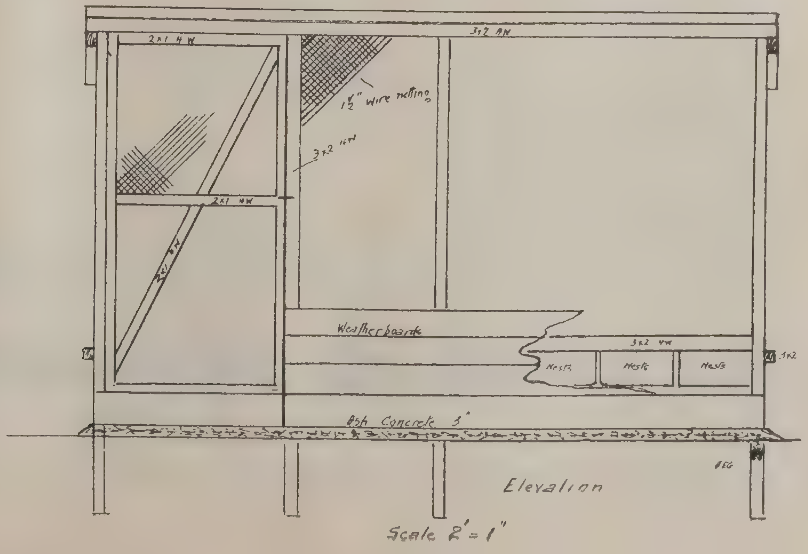
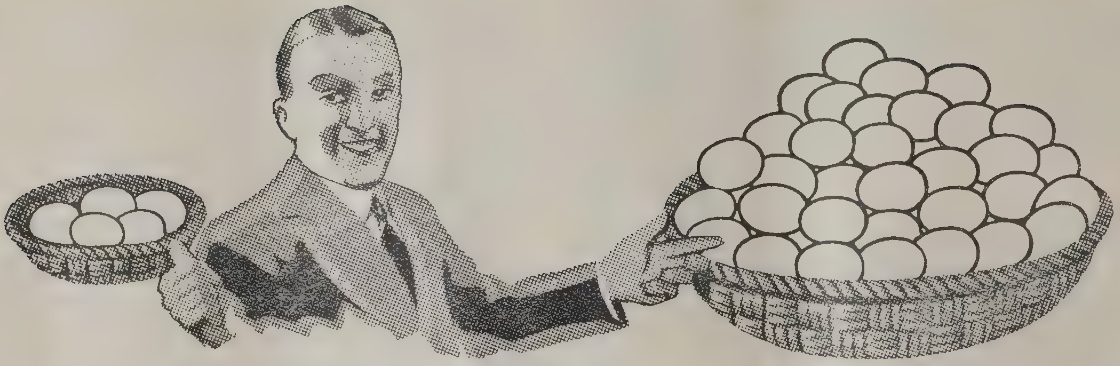

2x1 HW
3x2 HW
1½" wire netting
3x2 HW
2x1 HW
2x1 HW
Weatherboards
3x2 HW
Nests
Nests
Nests
1x2
Ash Concrete 3"
AEG
Elevation
Scale 2' = 1"

Fig. 2.



ONE TABLESPOONFUL OF KARSWOOD

in the mash is enough for 20 birds, but if fed regularly it means at least

ONE EXTRA EGG PER HEN PER WEEK

Do not imagine that Karswood Poultry Spice is a food. It is nothing of the sort. It is a tonic, and only a very little —one tablespoonful to every twenty birds—is needed to get them into the perfect health upon which a prolific egg output depends. The cost of that tablespoonful for 20 birds is infinitesimal. In fact, a 1/- packet will supply 20 birds for 16 days. Test it yourself. Go to your local grocer, storekeeper or produce dealer; buy a packet, then give it to half-a-dozen of your birds in accordance with the directions on the packet. Do not expect immediate results, for Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure. By feeding Karswood, you should get at least one extra egg per hen per week.

9 Eggs a Day from 12 Fowls in Winter Time

Dear Sir,

I have much pleasure in informing you that there is a very great improvement in my egg returns since using Karswood Poultry Spice. I have only 12 pullets (my yard being too small to keep any more), and before using your Karswood Poultry Spice I was only getting 5 and 6 eggs per day. I commenced using your Spice on the 25th June, 1929 and from the 1st July up to-day, 27 July, 1929, I have collected 243 eggs, an average of 9 eggs per day, Winter laying. (The price of eggs at present is 2/5 per dozen). Not too bad is it? And speaks well for your wonderful Karswood Poultry Spice. I have spoken to several of my friends about it and they are giving it a trial. I am still keeping further records of the daily return of eggs. The fowls I have are Black Orpingtons, September (late) hatch.

Yours faithfully,
(*Sgd.*) *VINCENT L. CRANNEY*
27/7/29 47 *Esher St., Burwood.*

7 Eggs a Day from 8 Fowls

Dear Sir,

I have been using Karswood Spice for several years, with excellent results. I have only 8 fowls, but have been getting on an average 6 and 7 eggs a day for some time, which is satisfactory, don't you think?

(*Sgd.*) *VICTOR POWELL,*
54 *Shipsters Rd., Kensington, S.A.*

"Beneficial for Egg Production"

Dear Sir,

I may state I've used "Karswood" for a number of years, both for my utility and exhibition stock. Not only is it beneficial for egg production, but it gives the plumage wonderful lustre when preparing birds for the show bench.

6/5/29 (*Sgd.*) *C. J. U.*
Original letter on file for inspection.

100 per cent. Egg Production

I am only a new chum in the game, but since I started with chooks I have used your wonderful spice. I have one pen of 6 pullets and rooster and I think the results (which I attribute to your Spice) are phenomenal. I have had 5 eggs for four days and 4 eggs for three days, that making one week, and to-day I have received 6 eggs from 6 pullets, this for the first time being 100 per cent. This average has been going on since the beginning of March. You may use this letter or any part of it as you wish.

(*Sgd.*) *S. HOLDEN, 7 Short St.,*
4/5/29 *Gladesville.*

"Of Great Value to the Fowls"

"I think Karswood is of great value to the fowls. They always seem to be in good trim when fed on it. I never lose any fowls through any sickness whatever, and always get a good percentage of eggs."

(*Sgd.*) *H. H. BISHOP,*
9/6/29. *Koorawatha.*

From 1 Egg a Day to 8 Eggs a Day

I have much pleasure in informing you that I was only getting about 1 or 2 eggs a day from eight hens, but, since using Karswood Poultry Spice, I have been getting eight eggs per day and the chickens and ducks are growing wonderfully. I will recommend it to anyone."

(*Sgd.*) *MRS. MACDONALD,*
Euccrabendinni E.,
23/10/29 *Bowraville, N.S.W.*

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/- 28lb. tin, 48/-

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

4.M.30

Insect Pests.

The fruitgrower knows probably better than the writer, the large number of insect pests which are detrimental to his industry, and that many of them, such as pupæ of the fruit fly, etc., hibernate in the soil. These are not safe from poultry owing to their partiality to insect life and their foraging nature. Caterpillars, grasshoppers, crickets, and beetles of many descriptions, which cause damage to fruit trees, fall easy victims to poultry, while the fowls' habits of dust bathing themselves in the shade of the trees, tends to keep the soil loose and prevents the undue growth of surface roots.

Manurial Value.

Possibly the greatest advantage in keeping fowls in conjunction with fruitgrowing is that of the manure distributed throughout the orchard. The grower knows what it costs to manure per acre or what it should cost, but he does not recognise the value of fowl manure. The quantity voided varies to some extent with different types of fowls and the method of feeding.

From a report published in the journal of the Ministry of Agriculture of Great Britain, of data collected at the College Poultry Farm, Theale, Reading, the following figures are taken:—

Quantities Voided by Different Birds.

Kind of Fowl	Weight.		Manure Voided Weekly.		Percentage of body Weight.	Manure Voided per Bird per Ann. (Fresh).	No. of Birds to Void One Ton per Annum (Fresh).
	Lb.	oz.	Lb.	oz.		Lb.	
Wyandotte cock	6	12	1	13	26·8	94½	24
Faverolle hen ..	5	12	1	11½	29·6	88½	25
Growing chicken, 14 weeks	3	12	1	2½	30·8	—	—

The breeds principally used for egg production in Australia are not shown, but it will be seen that the laying hen and the growing chicken void a greater percentage than an adult male bird, and with high-producing birds, such as the Leghorn and Orpington, a conservative estimate would be 30 per cent. of live weight; therefore, a 4-lb. Leghorn would void per annum 62½ lb., and a 5-lb. Orpington 78, while it would take thirty-seven Leghorns or twenty-nine Orpingtons to void a ton.

Composition of Fresh Poultry Manure.

The analysis of poultry manure varies with feeding, but that from stock fed on lines usually adopted for the maximum production should comply very closely to the following:—

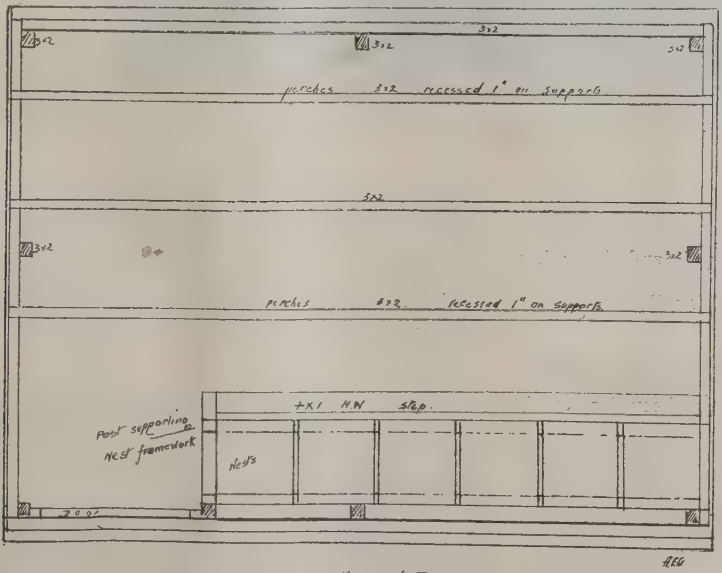
Moisture.	Dry Matter.	Nitrogen.	Phosphoric Acid.	Potash.
59.50	40.50	1.47	.71	.49

The commercial value of this manure, based on its unit value, is 39/6 per ton, and the running of 200 fowls or slightly less, per acre, would be the means of manuring the land to the value of £10. However, its principal property being nitrogen, some will be lost owing to its volatile nature, but there is in addition to the principal concentrates the organic matter—material which is an improvement to all soils.

Additional financial returns will depend largely upon the class of stock kept and the attention bestowed on them. Although they will save the grower many days' labor in cultivation, spraying, etc., they will demand daily attention, and to the producer who is not inclined to give them this attention they are not recommended. Only the best should be kept. The breeding, rearing, and feeding should receive the same attention as the poultry farmer devotes to this work, as it is only by these means that the maximum results will be obtained. Generally speaking, each hen should return a profit over cost of feed, when kept in the vicinity of Brisbane, of about 10/-, and 150 to 200 could be run per acre. This in conjunction with the manurial value should prove an incentive to fruitgrowers to work along these lines.

Making a Start.

Although the foregoing may appear attractive, in making a start, caution should be observed. The work of keeping poultry has to be fitted in and the great


3x2
3x2
3x2
3x2
perches 3x2 recessed 1" on supports
3x2
3x2
3x2
perches 3x2 recessed 1" on supports
4x1 H.W step.
Post supporting Nest framework
Nests
Door
AEG

Ground Plan.

Scale 2' = 1"

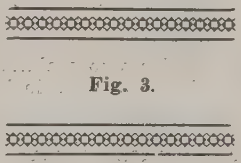


Fig. 3.

majority have to gain the experience essential for the rearing of young stock and the feeding of layers. A start should be made by the erection of a poultry house on the lines outlined in the plan, Figs. 1, 2 and 3. This house can be used with the addition of a cold brooder similar to that in Fig. 4 as a brooder house. After the brooding stage it can be used as a rearing house, and ultimately serve its original purpose of housing the adult laying stock. The rearing of chickens in quarters used for adult stock is not usually recommended, but under the conditions of range in the orchard soil contamination does not take place to any great extent.

Possibly the best months for securing chickens are August and September. Earlier chickens can be made use of if it is desired to have two lots during the one season, and so allow the first lot to get off your hands before a second lot is commenced with, say, in September.

The purchase of day-old chickens should then be made from some reputable breeder and so save the necessity of buying breeding stock, and the work entailed in incubation. By doing this the number of chickens you have for a start is definite, they will be of the same age, which facilitates rearing and prevents the period of chicken rearing being unduly prolonged and becoming irksome. In making the purchase be sure and go to a reputable breeder who maintains the qualities, of both numbers and size of eggs in his stock.

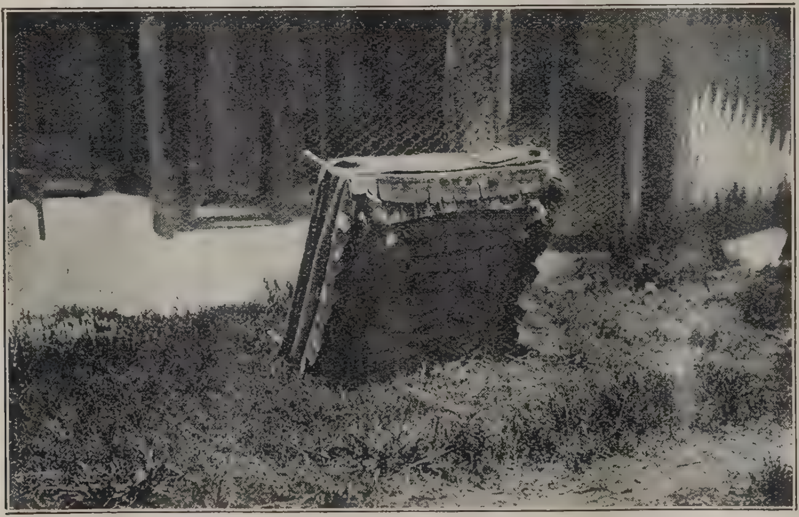


Fig. 4.—The cold brooder. Heated brooders are also obtainable.

Citrus fruit growing and poultry keeping is commonly practised in various localities. The benefits to this particular farmer of the combination have been less work and greater returns.

Netting partitions to keep various ages separate can be erected at convenient spaces if desired, but they would interfere with the cultivation of the orchard and are not absolutely essential. If chickens are reared in a special house and confined for the space of two or three weeks with a temporary fence they will invariably return to their own quarters to camp. Larger houses than shown in the plan may be built, but units of fifty placed at intervals about the orchard will ensure a better distribution of the birds' droppings and incidentally will cause the birds to forage over the whole of the orchard.

The system of feeding which is adopted may be either wet mash in the morning and grain at night or dry mash in hoppers which is before the birds all day and grain at night. The latter system especially to the novice and to the grower who desired to reduce his work is recommended. The birds by this means are assured of getting all the food they require for egg production, while the grower is relieved of a good deal of work daily.

Reference to the plan, Figs. 1, 2 and 3, plainly indicate the simple nature of the house suggested for the purpose of housing fifty laying hens. It is simple in structure, being open fronted, roofed, and walled at back and ends with corrugated iron. A 3-inch open space is provided between the top of the back wall and roof to permit of a good circulation of air. In front weather boards are used as a shield to the nests, the balance being netted in to allow of the stock being protected from predatory animals during the night. The nests are made from petrol tins, one side of which, with the exception of 1½ inch, is removed. This is then turned at right angles to prevent the tin falling through the nest frame-work. Three perches are shown, 3 by 2 hardwood being used. This is placed on edge and the top corners slightly chamfered. They are supported on the bottom batten, and by being recessed in to the depth of 1 inch are perfectly firm, at the same time are easily removed for cleaning purposes.

The floor is raised to the extent of 3 inches above ground level to ensure dryness. Concrete is recommended, being readily cleaned and it does not become saturated with droppings. Earthen floors become foul and require renewal at frequent intervals.

The lines suggested on which a start should be made are economical as regards permanent fixtures and equipment, and also relieve the producer for the time being of establishing breeding pens, the necessity of purchasing incubators, and becoming acquainted with the operations of an incubator.

Fruit Export from Tasmania

Export Charges Deemed Excessive.

Royal Commission Suggested.

THE TASMANIAN STATE FRUIT ADVISORY Board recently appointed a sub-committee to conduct an enquiry into matters relating to the overseas export of fruit.

At a meeting of the Board on June 20, the Committee's report was presented. Some of the export charges are considered excessive and should be reduced. It is stated that with the growers' organisations controlling the business, charges amounting to £41,000 could be practically eliminated.

The view is held that growers should receive the benefit of the exchange rates. As conflicting statements were made by witnesses during the enquiry, a Royal Commission of enquiry is suggested.

* * *

The committee's report is a lengthy one. Information from all quarters was sought—from the Departments of Agriculture in all the Australian States and from New Zealand. The system in vogue in connection with fruit export is stated to be similar in all the Australian States, excepting South Australia, where the bulk is shipped through the Government Produce Export Department. In New Zealand the whole of the fruit with the exception of the Otago Province, is exported under a compulsory scheme under the N.Z. Export Control Board, with which is associated the New Zealand Fruitgrowers' Federation.

Details are given of the fruit export charges in the several Australian States and New Zealand, together with an itemised analysis of the consolidated charges in England. At the enquiry evidence was given by growers' co-operative organisations and fruit agents, shipping companies, etc. The enquiry was confined to an investigation of the methods employed from the point of delivery at the export wharf and until the returns from sales are received by growers.

The report deals with the activities of the shipping companies and their agents as distinct from the doings of the agents who engage space for shipping fruit.

Regarding

applications for space,

the procedure was similar with all the firms engaged, each firm circularising growers during September or October, asking for preliminary applications for shipping space. Following this preliminary notice a personal canvass of the growers was made by the agents, and then about November or December another application form is posted to growers, and often another personal canvass is necessary to get the information to enable the shipping agents to secure the refrigerated space to lift the incoming season's crop.

Having secured this information, the agents meet as a committee and from the information tabled, representations are made to the shipowners, and the tonnage is booked. Conflicting evidence was given during this stage of the committee's enquiries. All the shipping agents, however, stated that no space allotments were made to persons other than growers except where packing sheds were run by buyers who took delivery of the fruit before being packed. In some such cases allotments of space were made upon buyers producing evidence of having purchased fruit from certain orchards.

Close details were supplied regarding inspection by the Commonwealth Department of Markets, stevedoring, insurance and overseas transport. With regard to the last-mentioned, there was evidence in recent times of more care on the part of the shipping companies. The freight of 3/6 per case is a big item. The condition of the fruit on arrival at overseas markets is a vital matter; every effort should be made to improve the system.

Then follow details of stevedoring at port of discharge, analysis of consolidated charges, transport to saleroom, sale by auction and private treaty.

The number of agents was steadily increasing. In view of the fact that no item appears as a debit against the growers on their returns, indicates that the remuneration of agents is obtained through some other channel than commission, namely, consolidated charges.

Conclusions and Recommendations.

The committee submitted the following conclusions and recommendations:—Shipping agents assert that a considerable item in costs was the personal canvass to growers. As the firms engaged in this work transacted other business, namely, selling spray materials, cases, etc., it was considered each branch of the business should carry its own costs instead of the whole being charged against the shipping fee.

It is the considered opinion of the committee that the personal canvass of growers is unnecessary, one shipping agent stating that if canvassing were done away with at least ½d. per case would be saved to growers.

There is no doubt the shipping charge is excessive and should be substantially reduced. The Imperial Economic Committee in 1926 directed attention to an unexplained balance in the consolidated charges. Presuming the unexplained balance being the same to-day as in 1926, there is an amount of approximately £41,000 deducted from Tasmanian growers' returns.

This arbitrary deduction for the purpose of employment of representatives and canvassers for overseas progress in Tasmania is, in the opinion of the committee, quite unjustifiable. With a growers' organisation controlling the whole of the business, this deduction could be almost eliminated, as is indicated by the following extract from a report received from New Zealand:—

"An outstanding instance of the direct saving effected lies in the abolition of the local agents. This saving (representing 3d. per case) accrues to the growers in the shape of a reduction of the consolidated charges from 1/- to 9d. per case on the U.K. markets."

Exchange.

The fruitgrower was entitled to the whole of the exchange of the London nett proceeds on all fruit sold on consignment irrespective of any advance having been made.

Several leading agents stated they were crediting the growers with the full amount of exchange.

Tasmanian growers incurred extra costs by shipping in a

multiplicity of brands

as compared with the uniform brand under New Zealand's pooling system. Under the present Tasmanian system, however, the cost of shipping could be substantially reduced by the systematic co-ordination of the shipping work.

There had been serious confusion this season at Hobart and at Beauty Point, which occasioned heavy losses to growers. There was a multiplicity of agents, and the method of alloting space was accentuated by the distrust which existed between the agents themselves.

The alternative to improving the present methods was to adopt an entirely new system which would give the growers absolute control of their own industry. Appreciation was expressed for the services of Mr. P. H. Thomas as Secretary.

* * *

In moving the adoption of the report, the Chairman of the sub-committee (Mr. Neil Campbell, M.H.A.), stated the report was unanimous. He traversed its many features, referring favorably to New Zealand's pooling system. The Tasmanian shipping charge was a bone of contention. The charges should be substantially reduced. He regretted that the Tasmanian Stevedoring Company had not given evidence. There were too many agents canvassing for fruit. A West Australian organisation effected a savi on agency fees of 3d., followed by a rebate of 3d. to 4½d. at the end of the season. What had been done in Western Australia could be done in Tasmania. The present lack of system was damaging to the business.

In seconding the motion, Mr. A. Davies said the report was a most thorough one. A Royal Commission would be necessary to extract evidence which had been refused to the committee.

Messrs. V. J. Skinner, T. J. Eddington, O. J. Morrisby, and A. H. Weedon spoke in support.

Mr. E. Ross (H. Jones & Co. Ltd.) congratulated the committee on its substantially fair report. He directed attention, however, to what he deemed discrepancies regarding figures from West Australia and New Zealand. The fact of a growers' representative to supervise shipping of allotted fruit would be advantageous.

After Messrs. H. W. Beauchamp, V. H. Saunders and the Chairman of the Board (Mr. B. J. Pearsall) had spoken, the report was unanimously adopted, and it was decided to appoint a deputation to await on the Premier to ask for a Royal Commission of Enquiry to include the question of stevedoring and the evidence given to the sub-committee in camera.

ROYAL COMMISSION REQUESTED.

Sympathetic Reply by Premier.

THE PREMIER OF TASMANIA (Hon. J. C. McPhee) and the Minister for Agriculture (Sir Walter Lee) attended the meeting of the Tasmanian State Fruit advisory Board. The Chairman stated certain information had been refused at the recent enquiry.

Mr. Neil Campbell urged that a Royal Commission be appointed, as there was much uneasiness in the industry concerning information which had been withheld.

The Premier, in reply, stated that the fruit industry was of first importance to Tasmania. The State Fruit Advisory Board had been set up to make investigations and report to the Government. As the Board was unable to obtain certain information, he felt the State Government should intervene. The Government would give careful consideration to the report adopted by the Board and the Board's requests.

GROWERS' EXCESSIVE APPLICATIONS.

Co-operative Company's Statement.

Mr. C. H. Cane, manager, Tasmanian Orchardists and Producers' Co-op. Association Ltd., stated that growers had "authentically" applied for space for 3,500,000 cases. The quantity shipped, however, would not exceed 2,350,000 cases, leaving a difference of over one million cases between the so-called authentic applications and the total quantity shipped.

It was owing to the low prices in Sydney that the present quantity had been submitted for export. Had the Sydney market been reasonably firm the quantity of fruit shipped overseas would have barely exceeded two million cases. Were the growers willing to pay 3/6 per case dead freight on the space applied for? The fact was the information received from growers was unreliable. This indicated both the difficulties with which shipping agents were faced and the fact that sufficient tonnage to lift all the fruit fit for overseas shipment had been made available.

TASMANIA.

AT a meeting of the Tasmanian State Fruit Advisory Board on June 20, Mr. B. J. Pearsall, M.H.A., presiding, replies were read from various fruit agents agreeing to credit growers with the rate of exchange on fruit exported overseas.

Charges on Fruit Exported.—The report of the sub-committee, which was adopted, is reported elsewhere in this issue.

Effect of New Tariff.—Owing to the new tariff, members expressed the fear that suffcient ships would not be available to lift the crop except at exorbitant freight rates. Mr. B. H. Saunders moved in favor of the Minister for Markets being asked to take steps to ensure the adequate carriage of next season's crop. Mr. A. H. Weedon seconded.

Mr. A. Davies said he dreaded bringing the Federal Government into Tasmanian affairs more than was absolutely necessary. He suggested the chartering of vessels. The motion was carried.

AUSTRALASIAN FRUIT EXHIBITION.

The report in our June issue, page 222, including the names of the donors of the various cups for competition should have included the name of T. S. Johnson & Co., fruit salesmen, of Liverpool, Manchester and Hull, as the donors of the Sturmer Cup (Sturmers' Pippins prepared for export), the prize for which was won by Bisdee Bros., Bagdad, Tas.

DRIED APPLES IN TASMANIA.

Channel Evaporating Co. Wins at Hobart Show.

At the grand Australasian Fruit Show, held at Hobart recently, the Channel Evaporating Co. won the first prize for best exhibit of dried Apples. This item was inadvertently omitted from our last issue.

The exhibit was particularly attractive, the quality of the products winning very much favorable comment.

Sydney Fruit Trade.

The Fruit Merchants' Sectional Committee of the Sydney Chamber of Commerce attends to various matters of policy dealing with the trade. The Chairman is Mr. J. Holmes, and the Deputy Chairman, Mr. A. M. Weymark. The Secretary of the Sectional Committee is Mr. J. N. Bell, who is also Secretary of the Sydney Chamber of Commerce.

Factors Affecting Citrus Fruit Quality.

Soil: Climate: Irrigation: Stocks and Bud Selection: Windbreaks: Manuring: Pruning.

FUNDAMENTAL FACTORS affecting the quality of Citrus fruit should receive first consideration. Some growers were faddists and had a tendency to pay more attention to minor factors,—stated Mr. W. R. Schoonover, Extension Specialist in Citriculture, Riverside, California, before the Citrus Institute Conference at San Bernardino, California. The following is a summary of the hints conveyed.

Soil.

The few fundamental factors of producing quality fruit are:—First, good soil. If a new venture is being started, the grower must do everything to create a good fertile soil or abandon the idea of planting. If the orchard is already established the owner has to make the best of it and improve it the best he can. Some soils have inherent bad qualities, being impervious to fertilisers and all other approved methods of soil betterment.

Climate.

Second is suitable climate. It is a well established fact that different varieties thrive and mature better in certain climatic conditions, and there are locations and climates absolutely unsuitable for Orange raising. A systematic study of the factors influencing the ripening of citrus fruits in California revealed that there are certain numbers of heat units positively necessary to the proper ripening of each variety.

8,000 heat units are required to ripen Navel Oranges;
9,000 heat units are required to ripen Grape Fruit;
10,000 heat units are required to ripen Valencia Oranges.

There are districts where one variety will ripen and another will not: where Navel Oranges will grow to a fair size but will never ripen. They will eventually fall off.

Pure Water and Leaf Surface.

A third important factor is pure irrigation water. Various detrimental tree, leaf, and root conditions are apt to develop if the irrigation water is impure. Salty water will affect the foliage and impair the quality. Foliage is of the utmost importance for the condition and amount of leaves on a tree influence the size of the fruit.

Experimental work in this connection has been done with Apples. To produce a good, marketable sized Apple the tree must have fifty leaves to each Apple. Thirty leaves to an Apple means small, miserable fruit for which there is no market.

Parentage and Root Stock.

Another fundamental factor is proper parentage. Be very careful of the bud selection. It is essential to have a good strain budded into the root stock. Root stock, Mr. Schoonover believes, has very little, if any, influence on the quality, except, of course, a sickly stock is not desired as a healthy tree will not grow from sick, diseased root stock, and naturally good fruit will not develop.

Cultural Practices.

Essential cultural practices: (1) pest control; (2) disease control; (3) orchard protection against wind and frost; (4) soil moisture control; and (5) maintenance of fertility. Pruning, cultivation and cover cropping are non-essential but sometimes useful practices.

Thrip scars the fruit, red spider works on the foliage, while red and purple scale, found nearly all over the world, injures the tree so it cannot possibly bear as high grade fruit. Do not worry about these pests too much, but if they happen to appear in the orchard consult the nearest agricultural specialist. Be wary of the procedure of control, for there are pest control methods that interfere with tree growth and foliage.

Disease Control.

Likewise disease control is very important. If a grower has need of exercising this kind of control, the State entomologist will be glad to assist him.

Orchard Protection.

Orchard protection has a very important bearing upon quality production. There are districts where the heavy winds in the spring result in as high as 40 per cent. culls. Wind breaks are highly important and an attempted "community protection" programme in certain areas has proved very satisfactory. Wind scars the fruit and causes quicker decay. It also defoliates the trees.

Moisture Control.

"Moisture control also has a great deal to do with quality, as irrigation affects the tree condition. Too much moisture will rot the feeder roots, while, on the other hand, if the grove is allowed to remain too dry the Oranges will be coarse and rough." Some growers have conceived the idea of forcing and over stimulating their trees with lots of water and an abundance of fertiliser. The quality and production was wonderful, but only for a few years. After such a period of over stimulation, the trees react very much as does the human body under a similar condition. They began to deteriorate with the result of poorer fruit sizes, texture and juiciness.

Maintenance and Fertility.

In some soils maintenance and fertility is a big problem, as some ground is naturally arid and lifeless. In such soils there is very little that can be done. Extensive experiments have proved that the well-rotted manures or fertilisers containing large amounts of organic matter give best results. Under this condition also cover crops should be planted. These are the two most effective ways of keeping the soil active and alive. Where mineral fertilisers alone have been used, the Agricultural Department has found that inferior quality fruit has been produced. The grower should study his individual trees and their needs and then work out an annual maintenance programme.

Along with the irrigation and fertilisation be sure also that the drainage is good.

Pruning.

"Pruning is not as important as tree conditions," Mr. Schoonover maintains. "If these other fundamental things have been right all the time, Orange trees will need very little, if any, pruning. It is a means of correction and is a useful practice, but not one of primary importance. I do not believe pruning will aid the quality of fruit except that an abundance of dead wood will choke the tree in time and may also scar the fruit if a wind or the tillage of the grove allows it to scratch against the Orange.

"Cover cropping is rather more a necessity and really is of great value,—an exceedingly useful practice."

In summarising his remarks, he said if growers will be students of their trees and see to it that the fundamental principles are followed faithfully, and the citrus growers would not devote so much time to worrying about this thing or that thing and running after this fad or that fad, they will do much better by their orchards.—"Citrus Leaves."

CITRUS FRUITS.

By Dr. Geo. E. Payne Philpots,
Founder of the Australian Better Health Association.

(Copyright.)

MOST PEOPLE in Victoria associate Mr. Harold Clapp with "The Eat More Fruit" slogan so well displayed on railway stations, and all sections of the community must appreciate this artistic and educational work, which not only benefits the consumers' health, but helps the citrus grower to market his valuable products.

Nature's Medicine.

The Orange is the most important of these sub-tropical fruits, and its large calcium, iron, and vitamin content has caused us to regard the Orange as one of nature's medical foods.

There is nothing better for young children to supplement the milk diet, therefore nursing mothers should take at least three Oranges per day, and if a child is fed on Lactogen it should have its ration of Orange juice.

This valuable fruit, besides containing calcium, also contains a liberal supply of potassium salts, which makes the Orange a base forming food.

The ripe Orange contains about ten per cent. of fruit sugar, which is really a predigested food, and calls for no extra nervous energy to digest it.

The Lemon.

Not so sweet as the Orange, but also rich in alkaline salts, thus making it also a valuable base-forming food.

It is wise to use Lemon juice with salads, in place of vinegar.

In all cases of cold, all food should be stopped and the patient should live on Lemon juice and honey. This is a safe and efficient way to throw off a cold.

Grape Fruit.

This member of the citrus family is becoming very popular as a breakfast food, and is valuable as a means of restoring a temporarily lost appetite.

Vital Chemical Energy.

It should be remembered that citrus fruits are full of vital chemical energy, which has been produced by the action of the glorious Australian sunshine.

Nature asks that you eat at least one meal per day of Oranges during the winter when this fruit is at its best. Your system requires the natural base-forming salts to remove the clinkers from your system, also, and even more important, to keep your blood vessels and kidneys in a state of health.

Those who eat liberally of citrus fruits always have strong, soft and healthy arteries, and are not subject to high blood pressure, and hard, brittle arteries. Therefore, eat and drink liberally of these health-preserving and medicinal fruits.

ORANGE EXPORT OVERSEAS.

The Victorian State Fruit Supervising Officer (Mr. J. M. Ward) has announced that recent amendments of the Commerce Act (General Exports) Regulations mean that the list of cases which may be used for Oranges intended for export overseas now includes the Californian type of case (inside measurements 24in. x 11½in. x 11½in.). The bushel and one-third case (23in. x 11 2-5in. x 11 2-5in.) has been deleted from the regulations.

The requirements for the "special" grade have been amended, and now reads:—

"Oranges described as 'special' shall consist of Oranges complying with the requirements of paragraph (d) of this regulation (48B). Markings on the skin, other than those caused by disease, are permissable on any individual fruit provided that such markings do not exceed 2½ per centum of the total surface area of each individual fruit." Paragraph (d) referred to above, reads:—

"The Oranges shall not be dry or immature, but shall be of normal shape and appearance common to the variety, sound and of reasonably even color, and shall be packed in either of three grades, namely, 'special,' 'Standard,' or 'plain.'"

ORANGES ARTIFICIALLY COLORED.

Use of Ethylene Gas.

"Harmful When Used by Unscrupulous Persons."

THE USE OF ETHYLENE GAS has attracted some attention in N.S.W., but has so far not been used extensively for the artificial coloring if citrus fruits. Whatever good it is capable of accomplishing for the industry, states the N.S.W. Department of Agriculture, it cannot be denied but that, in the hands of unscrupulous persons, who might use it to color immature fruit, the practice is capable of doing a great deal of harm. As a matter of fact, the misuse of ethylene gas in America has already led to many prosecutions.

In this connection, the claim being made by a local distributing firm—possibly with a view to popularising the treatment—that ethylene treatment not only produces the desired color, but also increases the sugar content of the fruit (in other words, ripens the fruit), is most misleading and incorrect, according to the results of analyses of "treated" and "untreated" Oranges carried out by the Department of Agriculture, and published in the "Agricultural Gazette."

The Oranges analysed were second-crop Oranges of the Parramatta variety, taken from the one tree growing in an orchard at Dural, N.S.W. One portion of the crop was treated with the gas and the other portion left untreated. The results of the analyses proved that there was no increase in fruit sugars in the treated Oranges, but on the contrary a slight diminution—3.94 as against 3.82. There was, however, an increase in fruit sugar from the hydrolisation of the cane sugar present—a process the reverse of ripening.

BUD SELECTION IN N.S.W.

In his report to the Annual Conference of N.S.W. Fruitgrowers, the Secretary, Col. E. E. Herrod, stated as follows:—

The following selected Valencia Late Orange buds were supplied to nurserymen during last year's budding season, and trees from these buds should be available during the present year:—

T. Adamson, Ermington	3,100
T. Eyles, Rydalmere	3,500
F. Ferguson & Son, Hurstville	1,500
R. Hughes, Ermington	1,000
Geo. McKee, Ermington	3,000
L. P. Rosen & Son, Carlingford	11,400
Swane Bros., Ermington	500

The Bud Selection Society had also supplied selected Washington Navel and Valencia Late buds to a number of nurserymen this year.

Victorian News and Notes

FRUITGROWERS' COOL STORES ASSOCIATION OF VICTORIA.

THE 50th quarterly meeting of the Fruitgrowers' Cool Stores Association of Victoria was held at Melbourne on May 27, Mr. W. Mock presiding.

Railway Freights.—The N.S.W. Railways wrote regretting that the 21-ton rate on interstate fruit could not be made applicable to the 6-ton minimum. Letter also received from the Victorian Railways advising that a special inter-system fresh fruit rates operative between Melbourne and Sydney would be extended to stations within 20 miles of Melbourne.

It was resolved that the Secretary interview the Railway Department to endeavor to obtain this concession on all fresh fruit consignments passing through Melbourne.

Messrs. G. Fankhauser and A. E. Hocking presented interesting report re Farmers' Convention. Mr. J. H. Lang reported success of recent Australian Conference of Fruitgrowers at Hobart.

Kindred Associations.—It was decided to write to kindred Associations, asking whether they would be prepared to send two delegates to confer quarterly on general matters affecting the industry.

Annual Conference.—Decided to hold the Annual Conference at Melbourne during August.

HARCOURT.

Important Fruitgrowing District.

HARCOURT IS AN IMPORTANT fruitgrowing district—100 miles north-east from Melbourne, between Castlemaine and Bendigo. Many kinds of fruit are successfully grown, but the principal fruit is the Apple—of which export varieties are specialised.

The soil is mainly a greyish loam and glitters with fine particles of granite, somewhat similar to the soil at Stanthorpe, Queensland, and Wenatchee, in the State of Washington, U.S.A., Pacific Coast.

There are outcrops of granite rock throughout the Harcourt district; in fact, one of the local industries is the granite quarry, where substantial quantities of high-grade granite are obtained for building purposes.

In this soil the Apple trees flourish, being long lived and bearing regular crops of high quality fruit. In this free loamy soil there is an entire absence of the root borer. This pest only thrives in soils of a heavier nature. Some trees are 80 years old and still bearing. We saw one Schroeder Apple tree which bore 35 bushels of fruit recently. The fruit, too, is of good carrying quality, being favorably known on British and Continental markets.

Apart from the export trade, Harcourt growers send substantial quantities to Brisbane and to Victorian country towns, notably the Mallee districts.

Harcourt is an irrigation district, the water being obtained from the Coliban River and the local reservoir.

The local cool store is co-operatively owned by the growers, and possesses a capacity for 80,000 cases.

There are several thousand acres under fruit in the Harcourt area. Surrounding districts are Campbell's Creek, Elphinstone, to the south; Harcourt North, Sutton Grange, Strathfieldsaye and Bendigo to the north.

In the North Harcourt area many young orchards are coming into bearing. Messrs. Ford Bros. 80-acre orchard looks particularly well.

A visit to the Harcourt district finds the growers in good heart; despite the setbacks of the past few years, the spirit of the pioneers remains triumphant. The early pioneers carved orchards out of the virgin forest. But the younger generation are still pioneers, for they, too, are bravely conquering the many difficulties which confront them.

* * *

A recent organising effort on the part of the Victorian Fruit Marketing Association resulted in a substantial increase in membership. The V.F.M.A. also has district groups in other parts of the State.

The Harcourt group has now a strong membership, and is capable of functioning effectively with a local President and Secretary.

PEAR EXPORT.

Important matters relative to Pear export were discussed at a meeting of the Pear Committee of the Victorian Fruit Marketing Association on June 20. The principle was reaffirmed that unwrapped Pears should be precooled for at least 4 days and wrapped Pears for at least 7 days before being exported.

The Chairman, Mr. E. I. Lawford, said that the most suitable case was the softwood long bushel. A great proportion of the Pears exported this season were in this case. This was a saving as against ½ cases and trays: also there was a saving in ship's stowage and freight. The findings of the previous Pear Committee meeting in favor of the long bushel had done much good.

Mr. Esmond Russell stated that the use of the long bushel made an enormous difference in stowage. Doncaster was about 99 per cent. in favor of the long bushel; other districts were 100 per cent. Somerville had changed over to the long bushel, but Harcourt still largely favored the half-bushel dump case. Tyabb also used the half dump. A uniform case was needed. By applying earlier more Pear shipping space could be obtained.

Mr. H. Ford (Harcourt) said the long bushel case had been tried: it was all right for small Pears, and even large Boscs, but was unsuitable for large round Pears, say, 2½ Glou Morceau.

Mr. Lawford said the long bushel had been found admirable for every variety.

It was decided to await the final returns for the season, when the committee would meet again and draw up a report for the Annual Conference in September.

SULPHATE OF AMMONIA.

Reduction in Price.

We are advised by the Nitrogen Fertilisers Pty. Ltd., 360 Collins-street, Melbourne, of a cut in the price of sulphate of ammonia, which will be sold at £12/12/- per ton f.o.r. as from July 1.

Recognised Fruitgrowers' Associations will obtain a discount of 5 per cent., while those Associations which are able to take 50 tons and over, during the year commencing 1/7/30, will receive a discount of 7½ per cent.

THE VICTORIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at Temple Court, Melbourne, on June 20. There were present:—Messrs. J. B. Mills (Vice-President), in the chair, J. M. Ward (Superintendent of Horticulture), H. Ford and K. Eagle (Harcourt), R. E. Fowler (Pomonal), W. H. Carne (Pakenham Upper), J. W. Bailey (Narre Warren), G. Brown (Merricks South), W. A. Webb (Doncaster), F. Cave, A. S. M. Harrison, and F. R. Mellor (Melbourne), R. E. Boardman (Secretary).

An apology was received from Mr. Lawford.

The Chairman cordially welcomed Mr. Ward, who suitably responded.

Leave of absence for Messrs. C. J. Parnham and J. Barker till October was granted.

Freight on Cases.—The Victorian Railways Commissioners wrote, agreeing to allow 45½ softwood cases to the ton instead of 42 as previously. The letter was received, and it was decided, on the motion of Messrs. Mellor and Carne, to request the Railway Commissioners to make the charge retrospective; pointing out that Messrs. Colombie and Mills interviewed the Department prior to the opening of the season and giving details of the large number of softwood cases which were being used.

Pear Export.—Mr. Mellor reported that the Pear Committee had met that morning. It was recommended to take no further action regarding the incident reported last meeting, of unpre-cooled Pears being sent from Harcourt, the grower having recognised his obligations. With regard (1) to checking the length of time of Pears in store for pre-cooling; (2) the use of the long bushel cases; (3) the securing of early application for Pear space to enable more chambers for Pears to be provided, the Committee preferred to wait till the end of the season and obtain full reports when the season's activities could be effectively reviewed. This meeting would be held before the annual meeting of the V.F.M.A. in September.

Mr. Ward stated that the average Pear grower put his fruit in cool store loose for several days, then packed the fruit and put it back in store for two or three days. The Pears were then sent by iced trucks to the ship's side. Inspectors were present at cool stores and at the wharf and took temperatures. An inspector at the country station would only pass unpre-cooled Pears for consignment to city cool store for pre-cooling.

Mr. Harrison said his practice had been to circularise growers in the terms of the Committee's previous recommendations: the agent had no check as to the conditions having been fulfilled. The report of the Pear Committee was adopted.

Softwood Cases.—A letter was read from Mr. C. H. Tutton, stating that at the recent Tariff Board enquiry the case for the primary producers was so presented, it was anticipated the Board would not recommend an embargo: Boxes for export should be permitted entry at lowest possible cost, while boxes for home consumption would apparently be made in Australia.

It was decided to fulfil the request of the Chairman for the assembling of data on this subject.

Cool Stores Association.—The Cool Stores Association of Victoria wrote requesting the appointment of two delegates to confer quarterly with representatives from kindred Associations on matters of general interest to all: thus to avoid overlapping and generally to advance the industry.

After full discussion it was decided to reply, asking the cool stores to advise details of any specific matters on which a conference was desired in order to give the V.F.M.A. an opportunity of discussing the matter beforehand. Similarly the V.F.M.A. would advise the Cool Stores Association of any matters in which the assistance of that Asosciation was desired

Organising the Harcourt District.—Mr. H. Ford reported that success had followed the visit of the Secretary to Harcourt. In that centre there were now 51 members, and it was thought another effort would further strengthen the membership.

The Chairman said much credit was due to the Executive members, Messrs, Ford and Eagle, and the Harcourt foundation members. On the motion of the Chairman, seconded by Mr. Cave, a very hearty vote of thanks was conveyed to the Harcourt foundation members.

Unfair Press Reports.

Mr. Brown stated that recent press reports concerning fruit exports were very unfair and harmful.

Mr. Fowler supported. He moved: "That this Association strongly protests against the tactless, ill-informed and damaging reports regarding Victorian fruit shipments which are appearing in the press, originating from those officials part of whose duty it is to guard our fruit industry. Recognising that criticism is desirable, and welcome, this should be directed through the proper channels for action and not made available to be read by those unacquainted with our marketing conditions, who might form an erroneous impression therefrom." Mr. Brown seconded the motion.

Mr. Bailey, in support, said that although fruit this season lacked color, it was not immature. The fruit outside the trees had been damaged by hail, and the more sheltered fruit not showing so much color was picked for export. If fruit arrived unsatisfactorily it was the fault of the shipping companies. Similar fruit as that exported was now in local cool stores in perfect condition.

Mr. Webb said he took strong exception to the remarks made by Mr. White that Pears were shipped over-ripe. Similar Pears to those exported were now in cool store, and if taken out would take 10 days to ripen.

The Chairman said that he felt that officers of the Department had suffered through this unjust criticism. They had performed their duty fearlessly. The fruit shipped from Victoria was probably 50 per cent. better on the average than that sent in any previous year. The motion was carried.

It was further decided that a letter be drafted by the President and Secretary to be sent to the press and the Minister for Agriculture.

Department's Advice to Growers.—The Chairman congratulated the Department of Agriculture on its method of advising growers of any faulty shipments. This was a system much to be preferred than having such items published in the press. While in Harcourt recently, however, a grower received a letter stating his Dunn's Apples had arrived badly bruised, presumably because of slack packing. A mistake had been made in this instance, as the grower concerned did not grow Dunn's: nevertheless, the Department's method was commendable.

Packing Pears.—Mr. Ford reported that many Harcourt growers were not convinced as to the suitability of the long bushel for all classes of Pears, particularly the large round varieties. The services of packing instructors would be appreciated. The vacancy caused by packing instructors having left the Department had not yet been filled. He moved that the Department of Agriculture be asked to have more packing instructors appointed. Seconded by Mr. Webb and carried.

FRUIT INDUSTRY LUNCHEON.

Interesting Innovation in Victoria.

"The Fruit Industry is of National Importance"—Bureau of Statistics Suggested—Possibilities of Exporting Apples to Canada.

Address by Mr. J. B. Mills.

AN IMPORTANT FORWARD MOVE has been made by the Victorian Fruit Marketing Association in inaugurating a system of monthly Fruit Industry lunches, at which men prominent in the business are to give addresses concerning the more constructive side of the industry.

It has been felt for some time that the negative aspects of the industry receive all too much publicity.

To counteract this, the V.F.M.A. has determined to conduct the present series of luncheon addresses to present to the public some considered aspects of the industry to show its national importance.

The first of the series was held at the Langham Cafe, Melbourne, on June 20, Mr. R. E. Fowler presiding.

Mr. J. B. Mills, Vice-President, gave the inaugural address. He said that V.F.M.A. was an attempt to establish an organised effort for the protection of the industry. Of all the primary industries, the fruit was **of greater national value** per acre than farming or dairy farming. The grower had to be more completely equipped, and had to have a knowledge of plant life, chemistry and manures. A large percentage of his earnings went into circulation. No industry requiring knowledge was complete unless it had a satisfactory costing system. A fruitgrower did not know what would be his costs till the end of the season. He suggested the creation of a bureau of statistics. It was to be hoped that the organisation would link up with the other States. One of the chief objects should be to get a clear and reliable estimate of production, and the consumptive power in Australia, and the export trade could be left to deal with the surplus. He referred to the trade with the United Kingdom and Germany, and to the prospects of a growing importance of the trade with Canada. The Canadians had decided not to go in for storage, but to ship to the summer markets, and so get rid of their fruit. That would enable Australia to **open a market in Canada.** For about three months the Canadian markets should be free from competition. It would be a matter only of organising to expand the trade. Overseas were various officials to assist the industry. They should be more or less advertising agents. Reports came to Australia of alleged defects in shipments, but little was heard of good shipments. Ill-advised reports published in the press did much harm. Growers should not send inferior quality Apples overseas just because these Apples had a fine appearance.

"Applim" Agricultural Lime (burnt and ground), containing 95 per cent. calcium carbonate, is offered by Lawford's Exchange Pty. Ltd., of Doncaster, Vic. This product is highly spoken of by talented authorities, and is appreciated by users. It is an extremely fine powder form, and is very readily soluble. From 5 cwt. up to 2 tons per acre is usually recommended, according to the frequency of the application and the condition of the soil; 10 cwt. each season being as much or more than most soils require.

IMPERIAL FRUIT SHOW.

Opportunities for Australian Citrus, Dried and Canned Fruits.

THE 10th Annual Imperial Fruit Show will be held at Leicester, England, October 24 to November 1.

In forwarding to the "Fruit World" a copy of their comprehensive schedule, the Secretary (Mr. J. F. Tamlyn) writes:—"At the time of the year that the show is taking place—the autumn—the classes for canned and dried fruits will be of particular interest to Australia. The classes in the canned fruits section, in particular, have been largely increased to enable various grades to be entered in separate classes." For Australian exhibits all entry forms and fees must reach the Secretary, Department of Markets, Dudley House, 527 Collins-street, Melbourne, on or before September 2.

The citrus section includes entries of five boxes each of Navels, Late Valencias, any other variety of Orange, Grapefruit, Lemons. First prize, gold medal and £5. Second prize, silver medal and £3. Third prize, bronze medal and £2. For three boxes each of Cayenne and Queen Pineapples, the prizes are gold, silver and bronze medals respectively.

The dried fruits section provides for two market cases each of Currants, bleached Sultanas, Raisins, Muscatels, Pears, Apricots, Peaches, Apples and Prune, the prizes being a gold, silver and bronze medal in each class.

For canned fruits prizes of gold, silver and bronze medals are offered in the several grades of canned Pears, Peaches, Apricots, Apples, Pineapples, Raspberries, Loganberries, Gooseberries, Strawberries, Currants, Cape Gooseberries, Grapefruit, Rhubarb, Peas and Sweet Corn.

Full details regarding entries are included in the schedule, copies of which are obtainable from the Department of Markets, 527 Collins-street, Melbourne. The English address is the Secretary, Imperial Fruit Show Ltd., 5 Bloomsbury Square, London, W.C.1, England.

AUSTRALIAN APPLES
AUSTRALASIAN FRUIT EXHIBITION

Australian Apple Export Championship (The Colombie Cup).—The Winning Exhibit and the Successful Exhibitor, Mr. R. E. Fowler, Pomonal, Vic.

Be cheerful. Give this lonesome world a smile.
We stay at longest, but a little while.

* * *

As for a little more money and a little more time, why, it is ten to one if either one or the other would make you a whit happier.—Benjamin Franklin.

Canned Fruits

1930 SEASON'S EXPORTS.

The exports of canned fruits to various destinations from the commencement of the season to May 31, 1930, were as follow:—

Destination.	Apricots.			Peaches.			Pears.			Total.		
	doz. 30oz.	doz. 21oz.	doz. 16oz.	doz. 30oz.	doz. 21oz.	doz. 16oz.	doz. 30oz.	doz. 21oz.	doz. 16oz.	doz. 30oz.	doz. 21oz.	doz. 16oz.
United Kingdom .	60,882	—	14,144	180,898	..	40,036	105,664	—	20,516	347,444	—	74,696
New Zealand . .	5,852	—	508	21,643	—	1,428	285	—	—	27,780	—	1,936
The East	854	—	144	1,862	—	191	1,415	—	234	4,131	—	569
Canada	3,552	3,464	2,272	12,158	19,868	10,706	1,552	2,360	860	17,262	25,692	13,838
Miscellaneous -	280	—	39	425	—	63	1,049	—	34	1,754	—	136
Totals	71,420	3,464	17,107	216,986	19,868	52,424	109,965	2,360	21,644	398,371	25,692	91,175

In addition to the above, 169 dozen Apricots and 1,464 dozen Peaches of miscellaneous sizes were exported to Canada.

CANNING PEARS.

Great Havoc by Pear Blight in U.S.A.

Will This Provide Bigger Opening for Australian Canned Pears?

Need for Rigid Quarantine Here.

(By P. H. Thomas, Chief Horticulturist, Tasmania.)

DURING RECENT YEARS fruitgrowers have fully recognised the importance of the rigid enforcement of the quarantine regulations in respect to the importation of plants from countries in which fire-blight (Bacillus amylovorus) is known to exist and the serious consequences to the Apple and Pear industries if this dreaded disease became established in Australia.

The widespread havoc caused amongst American orchards by the disease is instanced by a recent statement appearing in the "American Fruitgrower" by H. R. Rosen, of the University of Arkansas, viz.:—

"Great as the advance of American civilisation has been, it cannot be entirely considered in the nature of progress. Among the losses or regressions that have been experienced, the gradual extinction of the Pear tree constitutes one of the most recent and most vivid examples. In none of the older civilisations has this occurred. Endowed with soil and climate remarkably well adapted to the growing of the very finest varieties of this fruit, as many regions of the United States are, we nevertheless have been witnessing the almost complete extermination of our best Pears. In only a few more or less restricted regions of the country can the Bartlett, Clapp's Favorite, Anjou or other choice Pears now be found alive. And, judging by the cries that have arisen from Pear growers along the Pacific Coast within the past few years, we may even do without the canned Bartlett Pear in the near future.

"What is the reason for this widespread cataclysm? Why have the plant doctors been unable up to the present to prevent it?"

Although all the resources of science have been brought to bear upon the problem to-day, it is generally conceded that no entirely effective control measures have been discovered and "fire-blight" is slowly eliminating some of the finest Pear-growing orchards in America.

* * *

With this knowledge the question arises whether in the near future Australia will not contribute to a greater extent in supplying the world's markets with canning Pears, and also the opportunity of utilising suitable areas, especially those that can be irrigated, for further development of the Pear industry.

FRUIT CANNING INDUSTRY.

American and World Developments Reviewed from the English Standpoint.

Peaches, Berry Fruits, Pineapples, Also Vegetables (Beans, Peas, etc.).

REMARKABLE FIGURES of the American canning industry were given by Sir Edgar R. Jones, K.B.E., Chairman of the Empire Canning Council, in a paper read before the Royal Society of Arts, London, recently, writes the "Fruit, Flower and Vegetable Trades Journal," on "The Empire Canning Industry." In comparison, the British output is said to be puny, and yet the United Kingdom buys enormous quantities of these American canned products.

Continuing, this British report reads:—

"It is the contention of enthusiasts like Sir Edgar Jones that we should capture the bulk of at least our own trade, and Sir Edgar sets out in his paper to show the enormous possibility we have in our vast Empire to supply canned goods to the white and native consumers, who collectively number some 800,000,000. If the four Dominions and Great Britain are excluded from the figures of the British Empire, it is found that the total consumption of tinplates in the canning of foodstuffs in India and the rest of the Empire is only about 20,000 tons per annum, against the American consumption of 1,400,000 tons.

"A start, however, has been made in Great Britain, for there are now 18 commercial canneries operating in this country, equipped with the most modern type of plant, and it is predicted that in a few years the canning of fruit, Peas, and other vegetables will reach very large proportions.

"The old fear that poison lurks in the can is fast being removed, and the old prejudice against canned foods from a health point of view rapidly disappearing. Sir William Arbuthnot Lane has written a booklet based on an inquiry carried out by a committee of medical men appointed by the New Health Society, showing that vegetables cooked in the can were far more healthful articles of food than vegetables cooked in an open saucepan, and that in the case of fruits, the cooking in the syrup did not seem materially to affect any of the qualities of the fruit.

"We ourselves have enjoyed on several occasions home-canned Raspberries and most luscious they were: they would undoubtedly be greatly appreciated by English settlers in countries where the fresh fruit is not obtainable, and this is doubtless true of other of our fruits, if we could send them to our kin in distant parts.

"Sir Edgar stated that the canning industry first of all established itself on a large scale in districts where there was a mass concentration of a particular product like salmon in North America, meat in Chicago, sardines in Norway, and Peaches in California. Until the machinery of canning was applied to those masses of products in those localities the food could not be harvested. In each case the adjacent market was very small and the goods perished if they were moved to any distance in search of a market.

"The coming of the canning industry revolutionised that situation. The crop or yield could be harvested to the full, and it was found that the whole harvest could be profitably marketed thousands of miles across the seas in many countries. It was found that the same problem arose in respect of other products, and that the problem could only be solved by the same method.

"Agriculturists in certain areas found their land more suitable for growing peas, for instance, than for other products. Very soon the local markets were glutted and the goods perished on the way to more distant markets. The result was the ruin of the producers, and the abandonment of cultivation. There are farmers in Kent who sowed their land for peas only to find, when the harvest came, that they could not obtain a price in Covent Garden sufficient to pay for the picking.

"Some years large quantities of beans are left unpicked in Worcestershire, and there have been years when certain fruits have been left to drop and rot. This situation leads to the ruin or discouragement of the producers and the abandonment of cultivation.

"In America they have applied the machinery of canning to one product after another, and have restored extensive acreage to profitable cultivation. In 1928, over 255,000 acres were used for growing tomatoes, and over 200,000 acres for growing peas for canning. Altogether over 100,000,000 cases of cans of vegetables were produced. The States of California and North-Western America have developed an enormous fruit cultivation that would have been non-existent apart from canning.

"New fruit areas in Australia and South Africa have been developed during recent years, which would have been impossible without canning, which has also benefited Hawaii and Malaya."

CANNED APRICOTS.

Subsidy on Export to Great Britain.

THE Commonwealth Government recently agreed to make available an amount not exceeding £4,000 to subsidise the export of the 1929-30 season's canned Apricots to Great Britain. The subsidy is .6d. per doz. 30oz. tins, where the nett f.o.b. price does not exceed 6/3. Where the f.o.b. price exceeds 6/3 the rate of subsidy is to be reduced by an amount equivalent to that by which the nett f.o.b. realisation exceeds 6/3 per doz. 30oz. tins.

Canners to be eligible for the subsidy must export not less than 40 per cent. of their total 1929-30 pack of Apricots, Peaches and Pears before December 31, 1930. Further, the canner must produce evidence that the grower has been paid £9 per ton for Peaches and £11 per ton for Apricots and Pears (delivered to grower's siding or country cannery) for all fruit accepted for canning.

WEED, SEED, AND INSECT KILLER.

Controlled Flame-throwing Machine.

A new device for destroying weeds, weed seed, and insect pests is reported from Queensland. This is known as the "Reliable" weed, seed and insect killer—not a poison or a spray—but actually a flame-throwing machine, with a burning surface 2ft. wide, and giving a flame 10 inches deep and about three inches thick.

The controlled flame burns the weeds in the orchard rows, destroys the weed seed—most weeds are annuals—also kills the insect pests which harbor in the herbage.

The machine is made entirely of brass with the exception of the fire bars, which are of steel. It weighs 18lbs. when charged with half a gallon of petrol, which burns for practically one hour. Compressed air is pumped into the reservoir, thereby forcing the petrol through a small tube to the generator, where it combines with oxygen, thus causing the flame. The machine can be worked in any weather: half an acre of medium-sized weeds can be destroyed in a day, returning potash, phosphoric acid and lime to the soil. The price of the machine is £10. Full details obtainable from Mr. R. D. Sidco, Mellor-street, Gympie, Queensland.

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Highest Market Rates Assured
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Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

Queensland Produce in Melbourne

Citrus Season Finished: Passion Fruit Coming On.

Prices Easing for Bananas and Pines.

Bean Season in Full Swing.

DURING June, 1,332 tons of Queensland fruit and produce reached Melbourne—including Bananas, Pineapple , citrus, Custard Apples, Papaws, Tomatoes, Rosellas, Chokos, Guavas, Sweet Potatoes, etc.

The Tomatoes were from Nambour and Palmwoods, also Bowen.

The citrus season, which was marred by the presence of blue mould and scale, is now finished, with the exception of a few Grapefruit, which are selling at 11/- to 12/- per case. This Grapefruit does not compare favorably with the quality of the imported Grapefruit.

Regarding Beans, the Queensland climate, being ahead of the Victorian climate, the Queensland Bean season is now in full swing. An average of about 500 cases per week being received, but next month (July) it is expected this production will increase.

The majority of Beans are arriving in a coarse condition, this being apparently due to growers not picking the Beans frequently enough. If growers were to pick more frequently and spread their consignments between this market and a local market, it would ensure young and fresh Beans arriving on both markets, resulting in better prices to the growers. Coarse Beans were selling at the end of June at 2d. per lb. wholesale, but better quality Beans have sold from 4d. to 6d. per lb.

It is thought that weather conditions have favored the rapid growth of the Beans; alternate rains and sunshine have brought them along quickly, and the opinion is held that instead of the present practice of picking twice a week they should be picked every day. There is an assured market in Melbourne for young, fresh Beans at this time of the year.

Last year the prices ranged from 9d. to 11d. per lb. wholesale, but this year, owing to the heavy glut of local Cauliflowers and the fact that many of the Queensland Beans are on the coarse side, prices for the Beans are low.

Passion Fruit is making its appearance on the Melbourne market, and meeting with a ready sale at 8/- to 9/- per half-case. There are still some local Passion Fruit on the market, but the price is about 1/- a case lower than that from Queensland.

The Custard Apple season is in full swing, but the demand for this fruit is limited owing to the Victorian people not knowing the value and deliciousness of this fruit. Prices are about 4/- to 5/- per case.

The demand for Bananas and Pineapples has eased considerably, this being in keeping with the low prices ruling for practically every other fruit. Present prices of Bananas are for choice and "special," 23/- per double case, with odd lots at 24/-. "Standard" grade, 17/- to 22/- per double case, and "plain," 13/- to 16/-. The general price for Pines, 8/- to 10/- per case.

There are a number of Bananas arriving from certain districts which appear to have received a severe chill between the plantation and the arrival in Melbourne. When fruit arrives in this manner it is very difficult for the ripener to get the golden yellow color into the Bananas when ripened, and this has a serious effect upon the price obtained.

Mr. C. Parnell, Melbourne representative of the Committee of Direction of Fruit Marketing, is very active in attending to growers' interests and in pushing the sale of tropical fruits. By assisting Dr. Philpots, an audience of 500 people was reached in an important address on Bananas and Custard Apples.

Further, Mr. Parnell secured the publication of some very interesting information regarding tropical fruits in the Melbourne "Herald."

QUEENSLAND.

Montville.—Citrus fruits are mainly grown hereabouts —half Mandarins and Commons, the balance Valencia Late.

Pineapples are also extensively grown, but are not the major crop. There are about 180 acres under Pines in Montville proper. Flaxton and Mapleton also grow quantities of Citrus and Pines.

A great advantage is enjoyed by the Pineapple growers. Owing to the altitude—1,500 ft.—the Pines ripen three weeks later than the main crop on the lowlands, and so enjoy the high prices on the southern markets—especially the November crop.—Geo. C. Brown.

PROTEST AGAINST HIGH TARIFF.

At the recent Yorketown (South Australia) Producers' Conference, a resolution was carried as follows:—

"That this conference of the Agricultural Bureau strongly protests against the increased high tariff on imported goods."

The resolution was conveyed to the Tariff Board, with the endorsement of the South Australian Advisory Board of Agriculture.

Do not run any Financial Risk with your Fruit but Consign it to

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FRUIT EXCHANGE——BRISBANE

SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

South Australia.

ORCHARD PRACTICE IN SOUTH AUSTRALIA.

Cultivation: Spraying: Manuring.

Mr. R. A. Crammond, Basket Range, South Australia, gives his experiences as follows:—We do not practice autumn cultivation except when planting green crops such as tick or horse beans, etc. We prefer this variety as they are very easy to plough under, which we try to do in August, as, if left later there is a possibility of there not being enough moisture left in the soil to rot the large quantity of humus.

Our general ploughing programme starts in August carrying on through September. We plough on to the trees, leaving the furrow down the centre of each land. After finishing ploughing we work back the soil to the centres with a Harvey one-way disc cultivator, cutting out strips with a Berry hoe, and finally throwing on to trees again with the disc.

Our spraying programme

has been varied lately, but we think that, for our district this programme could be recommended.

Cherries.—Bordeaux or Burgundy in the pink or early spur bursting stage for fungus diseases. Arsenate of lead and white oil when trees are fully leaved for leaf-eating and sucking insects, etc.

Peaches and Nectarines.—Bordeaux or Burgundy at the pink stage and an oil spray combination if necessary, for aphids, and, if a wet season perhaps a later spraying with a fungicide would be needed.

Plums in my opinion need a spray at some time for red spider. I think an oil spray put on when they are getting on the move in the spring should be sufficient.

Apples and Pears get most attention with the spray pump.

A good dusting

with a fungicidal dust in the dormant stage is very helpful, followed by an application of lime sulphur, three or four gallons per hundred, in the pink stage, and later mixing lime and sulphur with the first two arsenate of lead sprays, namely the calyx spray, and one about ten days later, but weakening the quantity down as the season develops.

We are able to manage with three lead sprays in normal seasons, but when it is very dry, another application is needed at perhaps a weaker strength than previously, and a white oil could be added to save excess residue.

Sulphate of Ammonia.

Manuring we consider is very necessary to get best results. Nitrogen, as in sulphate of ammonia, gives us best results, but has to be used carefully on Apples, as the intense growth promoted shuts off the sunshine from the fruit and so causes a loss of color. We use as much as 6 lb. per tree on very large Cherrytrees. At one time we used bone-dust to supply phosphate, but now think we are doing quite as well by using super or finely ground rock phosphate, approximately 4 lb. per tree, when fully grown.

Both manures previously mentioned are applied just previous to the main growing period in the spring. Potassic fertilisers are useless in our district.

Gypsum has been very helpful to us in making our stiffer soils more friable and so reducing cultivation costs. We have had less rejects this season than ever before, and our trees are in wonderful heart, although we, in South Australia, are going through a very bad drought.

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NO MORE WASTE FRUIT OR VEGETABLES

Simple · *Self Contained*

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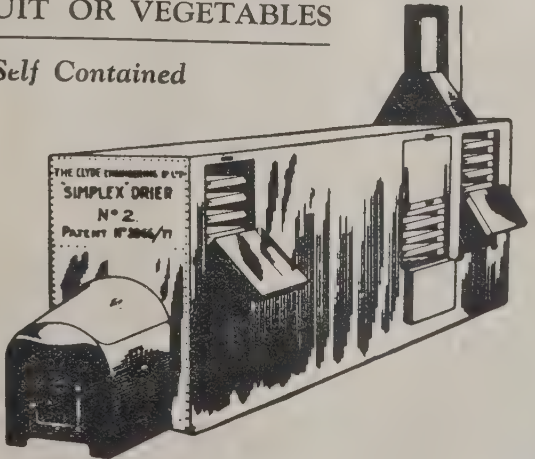

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

The monthly meeting of the Executive Committee of the S.A.F.M.A. was held at Adelaide on June 2. The Chairman (Mr. H. J. Bishop) presided, and there was an excellent attendance.

The Shipping Sub-Committee reported that arrangements had been made for space in the "Port Campbell" for a further 15,000 cases of Apples, and negotiations were being made for an additional 5,000 cases in the "Baradine."

Association Organiser.—The Appointment Sub-Committee advised that they had selected Mr. G. W. Norsworthy as organiser for the Association, and Mr. Norsworthy had commenced his duties, and reported that he was obtaining satisfactory results in the districts visited.

Australian Conference of Fruitgrowers.—Mr. G. Mack gave an interesting report of the proceedings at the Conference, and submitted samples of the fruit exhibited that had won the Colombie Cup.

Messrs. H. J. Bishop, H. N. Wicks, G. Mack, and A. V. Pitt were appointed delegates to interview the Minister of Agriculture, in conjunction with delegates from the S.A. Fruitgrowers and Market Gardeners' Association, to discuss the regulations at present in force in regard to inspection of fruit forwarded to the Murray districts.

Levies.—It was resolved that the Secretary write shipper-members, asking for payment of levies on or before June 30, which was the end of the Association's financial year. The amount of levy for the season had been fixed at one farthing per case, and was payable one half by the grower-member and one half by the shipper-member. It was unanimously decided that the shipper-member responsible for the levy was the one to whom the grower sold his fruit, i.e., if a grower sells to a shipper-member and that shipper-member resells to another shipper-member, the first party who buys the fruit from the grower is responsible to the Association for the levy, notwithstanding that, as he has resold the fruit, he is not the actual shipper thereof.

The first two parties to the contract are liable for the levy, and the purchaser's liability is not affected by subsequent dealings with the fruit.

Victorian Fruit Marketing Association.—The report of the April meeting of the V.F.M.A. was placed on the table and noted with interest.

ORGANISED MARKETING.

S. Australian Growers Combine to Develop the Melbourne Market.

(By Clem. W. McRostie, Melbourne Market Representative of the S. Aust. Fruitgrowers and Market Gardeners' Association.)

THE TWO MAJOR PROBLEMS confronting the fruitgrowers, and indeed all primary producers, in Australia to-day are—(1) The excessive and unnecessary costs of production; (2) the necessity for improved and efficient marketing of produce.

Growers are beginning to realise that, although the actual production—which includes the combating of pests and diseases—has reached a scientific basis, not enough attention has been paid by them to effective marketing.

Also, South Australian growers have found that organisations of growers can be more effective in dealing with the multitudinous problems in connection with the industry than can individual growers working alone.

Consumers very often view the organisation of growers for the purpose of co-operative marketing with apprehension, believing that prices will increase. On the contrary, the buying public is protected in this direction.

The majority of the fruitgrowers in South Australia are members of the S.A. Fruitgrowers and Market Gardeners' Association, an organisation which exists for the purpose of improving the industry generally, and for the control of marketing. It is fairly obvious that conditions governing different products vary, and, therefore, various sections have been created to deal with their own particular problems.

Growers find that Melbourne offers a very attractive market for many lines, and a very valuable and lucrative export business has been built up with the Victorian capital. The Association has a market representative in Melbourne, controlling the schemes of orderly marketing which are in operation. The object of these schemes is to obtain maximum economy in marketing with beneficial results to the producer and consumer. Briefly, the methods adopted as as follow:—

1. The selection of suitable agents, to whom all the consignments are sent, thereby abolishing overlapping.
2. The improvement of packing and grading of fruit and vegetables.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
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Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

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Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET,
Melbourne

3. The elimination of excessive profits by middlemen.
4. The adoption of orderly marketing to avoid gluts.
5. Reduction of transport costs and other overhead charges.

Owing to the marked success achieved by sections which have adopted such methods, it is expected that other sections will shortly be desirous of co-operating with them. It is desirable that, as growers in the various States realise the benefits derived from concerted action in regard to marketing, some co-ordinated scheme should be evolved, which would tend to eliminate, to a very large extent, indiscriminate consigning from one State to another which, in many instances, proves disastrous to the growers concerned. The movement could also go so far as all such organisations co-operating for the purposes of overseas trade. It is fairly obvious that there is room for a good deal of improvement in present exporting methods. Furthermore, statistical and technical information interchanged among the various growers' organisations would rapidly have the effect of improving the efficiency of the industry.

The South Australia organisation hopes to convince all growers in that State that such marketing schemes as outlined above are essential. Queensland has a compulsory scheme. However, the S.A. Association is convinced that a voluntary scheme, which operates with a minimum of cost and a maximum of efficiency, is much preferable to a compulsory scheme.

Whether a marketing scheme be compulsory or voluntary the principle is the same, and it is to be hoped that growers will organise to safeguard their own interests before being compelled to do so by adverse circumstances.

* * *

Mr. C. W. McRostie is the Melbourne representative of the South Australian Fruitgrowers and Market Gardeners' Association. He has been in Melbourne for some nine months, attending to the orderly marketing of South Australian Tomatoes and Celery.

The South Australian Association have several sectional committees. For instance, there are some 250 Tomato-growers, who produce Tomatoes under glass. They supply the Melbourne market during the months of October, November, and December. The Tomato-growers form one section of the Association, Celery growers another, and so on.

By a levy of ½d. per case, Tomato-growers are able to finance their Melbourne market plan. Last season was a record, some 120,000 cases having been sent to Melbourne in the three months. The price opened at 50/- per half bushel early in the season, but later on, when Victorian Tomatoes came on the market, supplies ceased of the hothouse Adelaide supplies.

The South Australian Fruitgrowers and Market Gardeners' Association, through its Melbourne representative, arranges a minimum price with the eighteen agents who operate on behalf of the Association. The minimum price is fixed after consultation with the agents.

Mr. McRostie's duties are directed towards orderly marketing and seeing that a maximum quantity is disposed of and that agents do not receive more than they can effectively handle.

In the matter of agents, the Association is working with the substantial men in the trade. Should any reduction be desired it will be by a natural process of elimination.

The Celery is packed in "Banana" crates containing 18 to 24 sticks. Prices range about 7/- to 9/-. Up till recently the freight has been from 2/4 to 2/7 per case, but efforts have been made to have this product carried at the fresh fruit rate, when it is hoped that this concession will be granted which will mean a reduction in freight of 9d. per case.

The Celery is of excellent quality, and greatly appreciated in Victoria. It is superior to the Victorian-grown article. The Celery is produced largely in the Torrens Valley and the Adelaide plains. Mr. McRostie is active on behalf of the growers' interests.

CODLIN MOTH CONTROL.

Experience at Red Hill, Victoria.

Messrs. Sheehan Bros., orchardists, Red Hill, Victoria, report as follows:—"Now that we have completed harvesting this season's Apple crop, we are pleased to report the excellent results obtainable after using "Clensel" for the control of codlin moth. On the block tested our percentage of codlin last year was 50 per cent.; this year it has worked out at less than 1 per cent. Our formula was: First spray, 4 lbs. arsenate of lead powder, 1 gal. of Clensel in 80 gals. water. Second spray, January, 2 lbs. lead, 1 gal. Clensel in 80 gals. water. Third spray, February, 1 gal. Clensel to 100 gals. water."

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Specialists in Australian Fruit.

Solicit consignments of Apples, Pears, Etc.

Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; and A. J. Walshe & Co., Hobart, Tasmania.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.

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ORCHARD MANURES.

Experience with potash manures was given by Mr. Keen at a recent meeting of the Port Elliott Agricultural Bureau. Mr. Keen said potash manures improved the sugar, color, and the quality of the fruit and vegetables. When fruit trees grew old, potash helped to strengthen the wood. He thought there would be a manure manufactured before many years, consisting of ammonia, potash, and superphosphate, that would suit the gardener and fruit grower for manuring his crops. Fruit for export needed to be of the best quality, and potash manure was one of the best to use to grow fruit of a high standard. Vegetables and fruit grown with potash manures kept better than those grown without it.

Dry Dusting for Insect Pest Control.

Mr. Keen said that in some districts dry dusting had taken the place of the wet spray. Wet spray had its advantages in that it destroyed the eggs of insects, but dry dusting was much easier to do, as one man could handle it, whereas it took two with the wet spray. Parrots, he said, were becoming a greater nuisance than ever since Subterranean Clover was being grown more extensively, and he thought more serious consideration should be given to their destruction.—"South Australian Journal of Agriculture."

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QUICK BREAKING

White Oil Emulsion

Easy to mix, Effective in result,
Economical in quantity.
USE NOW
ON CITRUS TREES.

PARSONS & JAQUES
Manufacturing Chemists,
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Abbotsford, Vic.

Tasmanian Agents—
N. L. HOPKINS, HOBART.

COLOR IN APPLES.

Color in Apples.—"Pale Fruit," Ringwood, writes.—Will sulphate of iron, used as a manure, improve the color of Apples? If so, what quantity per tree and also the best time to apply and how to apply. Would it be better to dilute it and apply as a liquid? I have used sulphate of potash for color, but find the trees make good leaf growth and the color of the fruit is no better. Could any of your readers suggest anything better than the above?"

Answer (by C. G. Savage, Dept. of Agric., N.S.W.).—Although it is claimed by some growers that sulphate of iron tends to intensify the red color in Apples, I cannot quote any definite data that there is any justification for the claim. It is known that sulphate of iron induces the development of chlorophyll in the leaves, but what action the increased chlorophyll will have on the color of the fruit has not been determined. Applications can be made by dressing the soil with half to one pound of sulphate of iron crystals per tree.

"Jonathan," Dandenong, writes.—I have some Jonathan trees which bear well, but the fruit is deficient in color. The soil is heavy with clay sub-soil. Could you tell me what manure I could use to aid their coloring?

Answer (by Frank M. Read, M.Agr., Sc., Horticultural Research Officer, Department of Agriculture, Vic.).—Re enquiry from readers at Ringwood and Dandenong respectively. Although statements have been made from time to time on the effects of certain manures on the color of the fruit, notably potash, investigation has usually found such statements to be unfounded.

I know of no manures I can recommend for the purpose, and, so far as I can see, there is nothing in the literature of any other country which would help us.

The color of the fruit is largely determined by the density of the foliage. That is why at Harcourt, where leaves are more scarce, the fruit is usually well colored: while in the south, on a well-grown healthy orchard with good leafage, the leaves shade the fruit, and prevent the formation of a high color.

Some Peach growers are known to thin out the laterals for this reason, and it is possible that some improvement may be effected by pruning to get the maximum of sunlight.

I can only suggest that growers experiment along these lines. Any summer pruning, however, should be done with caution.

It must be realised that one cannot altogether change the character of a tree at will. The Huon district of Tasmania—possibly one of the best Apple districts in the world—always produces Jonathans less highly colored than many Victorian districts.

APPLES AND PEARS FOR DAIRY COWS.

The following reply has been supplied in the "South Australian Journal of Agriculture," by Mr. H. B. Barlow (Chief Dairy Instructor), to an enquirer who asked if Apples and Pears could be fed with bran to milking cows:—"Apples and Pears can be used to supplement a cow's ordinary ration with beneficial results, but by themselves they cannot in any way be looked upon as a satisfactory or complete ration for a dairy cow. To obtain the best results, they should be either cut in half and mixed with chaff and bran or fed separately. The amount of chaff required to balance the ration will depend on the amount of roughage or grass available. To get the best results, the cow should be fed as much roughage (grass or chaff) as she will consume comfortably. Apples and Pears, although making an apparently large bulk, contain a very high percentage of water, and a comparatively small proportion of solid matter. Their chief food value is in the high sugar content, which in itself is not the most valuable constituent for milk production. For this reason a liberal quantity of bran or crushed grain (preferably oats) is required to balance the ration to enable the cow to make the best use of the food available."

VALUABLE NEW APPLE.

A NEW APPLE, "Woolbrook Russet," has been favorably commented on in the English press. This new variety, raised by Messrs. Stevens & Son, received an award of merit when exhibited before the R.H.S. Fruit and Vegetable Committee on April 23. It is a culinary variety raised from Bramley's Seedling, crossed with King's Acre Pippin. The fruit is somewhat flattened at the apex and base, the eye being set in a shallow ribbed basin. The ripe fruits are greenish yellow with a considerable amount of russet at the base and with evidence of a reddish flush. The firm, solid flesh of the fruits so late in the season points to the value of the variety as a market sort.

Western Australia.

Heavy Crop of Citrus ∴ Deputation Seeks Assistance to Send Trade Commissioners to Singapore and Java.

ON June 18 a deputation from the W.A. Citrus Growers' Association waited on the Minister for Agriculture (Mr. P. D. Ferguson), urging the Government to assist in opening up fruit markets in Java and Singapore.

The deputation was introduced by Mr. R. S. Sampson, M.L.A., who stated that unless new markets were found the local market would be glutted, owing to the fact that there would be a record crop. It was requested that the Minister grant £100 to enable two representatives of the growers to visit Java and Singapore and make arrangements for the marketing of the fruit.

Mr. A. C. R. Loaring stated he had been to Singapore and thought that 10,000 cases of Oranges could be disposed of there. The ships trading to Singapore were important potential customers, for though they carried their own fruit in the past, this was only due to the lack of cool storage facilities at Singapore.

As the present market price was unremunerative (ranging from 2/- to 7/- per case), and there would be about 30,000 cases more than usual, the position was a serious one. It would be of advantage to all concerned if 10,000 cases could be sold to the Near East.

Mr. S. V. Evans (Secretary of the Association) said that from information supplied to him it appeared as if this market had unlimited possibilities. American fruit was selling freely in a market which should belong to West Australia.

Mr. A. W. Barrett (Gosnells) stated that in his opinion Oranges could not be grown profitably at the prices received in the local market, and it would be a great benefit if this export market could be secured.

Mr. G. Schmidt said that there would be an insufficient outlet for the citrus this year, and that last year trial shipments to London had proved a failure. As there was not a Trade Commissioner, the Association desired assistance in opening up the market.

Reply by Minister.

The Minister, in reply, pointed out the shortage of funds of the Department of Agriculture. He expressed surprise that a market which was alleged to be so promising had not been opened up by private traders and business men. He had been to Singapore, and while admitting that the population was enormous, the vast majority were natives, who would not be able to pay the prices for fruit which would be desired by Australian growers. However, there was a wealthy section of Europeans, who would probably prove good buyers. Mr. Ferguson further stated that the output of the industry in Western Australia had been fairly steady and local consumption had accounted for most of the fruit produced. He suggested that growers should get into personal touch with those traders and business men who had established connections with the desired market, and see if something could not be done in that direction. Some of the surplus would be used for fruit drinks.

Mr. Loaring stated that there was £4,000 worth of juice in stock from last year, which would be enough for the coming season.

The Minister, continuing, said that he believed the Java and Singapore markets rightly belonged to Western Australia, and would see if assistance could be given for the sending of one representative, as the white population might prove good buyers.

Mr. Evans stated the white population of Java to be 106,000.

The possibility of getting into touch with traders was discussed by Messrs. Ferguson and Loaring. It was understood that there was a cool store accommodation at Singapore for 10,000 cases of fruit.

The Minister asked that the deputation endeavor to promote trade through existing channels and if unsuccessful to again approach him.—"Primary Producer."

FRUIT FLY LURE.

Western Australian Experience.

A Western Australian fruitgrower, writing to Mr. Bruce Anderson, of 54a Hoddle-street, Abbotsford, N.9, Victoria, states as follows:—"We have made an important discovery as regards a trap for the fruit fly. It is the female fly which does the damage, and she is very wary and hard to trap. Her old man is easy to trap with pollard and poison in a tin. We got a jam tin and quarter filled with Clensel (British product), 1 in 10, and hung on a fruit tree, and by next day found over 60 flies dead in the stuff, and one examination by expert found a good percentage of females. So far, this is interesting. To be most effective growers should use a tin with an edge, as the lever top tins are, or similar to the inkwell with the sloping sides, and suspended with three wires with holes on the sides so that when rain comes it will flow out through holes, the tins to be hung under the tree on east and west side, where the sun gets at them and near the fruit. Clensel attracts them, and they go over the top and drop in. The tins only want to be a ¼ pint at most and half filled, and, as I figure it out, the solution for each tin would only cost about a farthing (¼d.). Later.—Have just got the result of the examination—over 75 per cent. of the catch were females, which is very good.

Margetson & Co. Ltd.
Fruit Importers and Salesmen
30 James Street and James Street Warehouses,
11 Neal Street,
COVENT GARDEN, LONDON, W.C.,
and at Jamaica House,
9 and 10 Botolph Lane, London, E.C., and
56-58 Stanley Street, Liverpool.
Sales by PRIVATE TREATY.
Prompt Returns and Settlements.
Tel Add.:—FRUTERO, LONDON.
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STILL CHEAPER !!!

SULPHATE OF AMMONIA

A reduction of **£1/11/6** per ton in the price of
SULPHATE OF AMMONIA
will take effect as from the 1st July.

The new price will be **£12/12/0** per ton free on rails, less 2½% for cash, and at this price supplies of Sulphate of Ammonia can be obtained, as usual, from all fertiliser manufacturers or their agents or direct from the Metropolitan Gas Co., 196 Flinders Street, Melbourne.

Sulphate of Ammonia literature, and advice regarding the use of fertilisers direct from:—

NITROGEN FERTILISERS PTY. LTD.
360 Collins Street, Melbourne.

APPLE EXPORT GRADING REGULATIONS.

N.S.W. Urges That the Commonwealth Regulations be Brought into Line With the World's Standards.

THE APPLE EXPORT GRADING regulations formed a subject of profound interest at the recent Australian Conference of Fruitgrowers at Hobart.

After prolonged discussion it was decided not to recommend any change for the present.

The World's Standards.

The N.S.W. growers who originated the proposals for the alteration of the grades, set out their ideas in the following summarised form:—

Apple Export Grading Regulations.

The New South Wales growers are urging the adoption of the American North-West grading regulations, as we consider these the most practical regulations in the world.

As they have for years governed the packing conditions of from 50 to 100 million cases of Apples per year, and have been drafted by the growers concerned, it is pretty good evidence that they would prove satisfactory to us.

As a matter of fact, after comparing them with all the other available grading regulations in the world, we consider them the simplest and most practical, and far less rigid than the grotesque regulations in force in this country.

Their first, or Extra Fancy grade, is approximately equal to our second, or Standard grade.

Their second, or Fancy grade, is between our second and third grade.

Their third and fourth grades are approximately our third and fourth grades.

So that all our proposal amounts to is this:—To wipe out our Special grade, which nobody uses, and put in instead a grade between Standard and Plain. The grade put in would carry ¼in. blemishes, the Plain would remain the same as now, with ½in. blemishes.

In this way you would have your grades in regular and ordered sequence.

They would be grades in line with the rest of the world.

They would become standardised with the world's standards.

They would bring our standards of grade into line with correct grading practice.

Apple and Pear growers in N.S.W. are asking their fellow growers in the other States to thoughtfully consider the foregoing views with a view to improving the export of fruit from Australia.

INSECT PEST CONTROL.

Codlin Moth.

The principal thing to be done during the winter months is to examine the hessian bands and dip same into boiling water to destroy larvae of this moth. Packing sheds and old fruit cases should also be attended to, as these are places where the grubs hibernate. Remove all loose bark and destroy grubs. Poles used for supporting branches of fruit trees should be examined and treated with boiling water or sprayed with kerosene to destroy larvae.

Black Aphids of Cherry.

To kill the eggs of these very destructive insects, spray with red or white oil, at a strength of 1 in 20 in winter. Lime sulphur spray will also give good results.

Pear Mite (Phytoptus).

All fallen leaves should be raked up and destroyed by burning. Trees should be sprayed with lime sulphur or oil sprays.

Vine Scale.

This large brown scale is spreading on Japanese Plums and other fruit trees. It spreads very rapidly and causes much damage. Spray with red oil, Volck, or any of the light oil sprays.

Woolly Aphis.

The following spray used in winter has given good results against these insects, viz.:—Nicotine sulphate, 1 pint; red oil, 1 gallon.

To prepare sufficient mixture to treat 100 trees, 1 lb. soap should be boiled in a gallon of water till dissolved; add 1 gallon red oil and mix thoroughly; then add 1 pint of nicotine sulphate, and after mixing the whole for a few minutes, add 80 gallons of water. In spring introduce the woolly aphis parasite into the orchard.

Scale Insects.

Lime sulphur wash 1 in 9, or miscible oil emulsion, 1 in 15, is recommended. If the trees are badly affected with scales, two sprayings should be given. Burn all prunings.

Goodman's
FRUIT TREES
Reliable
Sturdy
Growers
Prolific Bearers

Australia's leading Nurseries for over 40 years, Goodman's offer Reliable Trees in all varieties at exceptional Values.

Trees carefully packed and promptly despatched to all parts of the Commonwealth.

WRITE FOR NEW FREE CATALOGUE, giving details of all varieties, including—

Almonds, Apricots, Apples, Cherries, Nectarines, Peaches, Pears, Plums, Damsons, Japanese Plums, Prunes, Quinces, Persimmons, Passion Fruit, Grape Vines, Currants, Gooseberries, Raspberries, Strawberries, Rhubarb.

C. J. GOODMAN
Picnic Point Nurseries
BAIRNSDALE - VICTORIA

(W. McF.)

Australian Dried Fruit.

AUSTRALIAN DRIED FRUIT OVERSEA SALES.

For the week ending June 12, 421 tons Australian dried fruit, valued at £16,800, were sold in British markets.

Sales included 247 tons sultanas, season 1929, which made an average of £36/12/- per ton, and 165 tons Currants at an average of £43/18/9.

Shipments for the present season now amount to 24,833 tons, including 10,155 tons Currants, 13,903 tons Sultanas, and 775 tons Lexias. Corresponding figures at the same date last year show 28,660 tons.

The Commonwealth Dried Fruits Export Control Board have received advice of sales of dried fruits valued at £14,900 for the week ending June 19, 1930.

This represents 376 tons of fruit, including 209 tons of old season's Sultanas, at an average of £35/13/3; 9 tons new season's Sultanas at £57/18/6, and 150 tons new season's Currants at £43/16/4.

Australian Muscatels

In view of the embargo on imported Muscatels, it is anticipated that this season there will be a greater demand for the Australian product, and it is as a result of this many local companies intend pushing the sales into the better class trading houses where the Malaga usually ruled.

Market Valuations from London.

In regard to the new crop of Australian Currants, we are advised that these have created some interest on the London market, but buyers seem to be operating very cautiously. Holders at the moment do not appear to feel disposed to ease their quotations, as spot stocks are small and with very few Greeks offering there is very little competition. High prices have been made for outstanding parcels of fruit showing size and color. Principal sales of Australian Currants have been made at 43/- to 49/-, whilst a few parcels have sold at 55/- to 60/-.

VINE PRUNING.

Improving the Quality of the Fruit.

DURING an interesting address and demonstration of pruning at Red Cliffs on Tuesday by Mr. A. V. Lyon, of the Commonwealth Research Station at Merbein, Mr. Lyon said the practice of pruning trees and vines was an old one, and one of the main purposes was to improve the quality of the fruit. The fruiting habit of each variety had been studied and the general division into spur bearing and cane bearing varieties was established for the varieties grown in the district.

Recent research work had been directed to other important aspects of the question, and in this connection the following points were of interest:—

(1) The quantity of the fruit increased with the quantity of bearing wood, the unpruned vine being the heaviest bearer. Approximately 1½ cwt. average of the fresh Grapes had been obtained from unpruned sultanas during the past two years.

(2) The quality of the fruit on an unpruned vine was inferior, resulting in small and uneven bunches.

(3) The bunch of the currant vine, and to a lesser extent the sultana, bore a direct relationship to the shoot on which the bunch was borne. Small shoots produced inferior fruit.

(4) The undesirable characteristics of the fruit on an unpruned vine were exhibited also on vines on which too much bearing wood had been left.

(5) Late and unsatisfactory ripening of both canes and fruit was characteristic of vines carrying too much fruit.

(6) Excessive bearing wood resulted in inferior quality of the bearing wood for the following season.

Accepting these facts, the pruner should first decide how many canes his vines could carry, remembering that soil, routine methods and manuring affected the question. In earlier pruning demonstrations they had advocated six, and on very strong vines eight canes as a maximum. He could see no reason to alter this recommendation, and would go so far as to say that the practice of leaving 10 or 12 canes per vine was the worst practice that has arisen in this district. Increased yields, however, were of little value when accompanied by delayed ripening, inferior quality and ultimately a proportion of fruit which could not be dried at all, or was dried so late in the season that the quality was hopeless.—"Sunraysia Daily."

HORTICULTURAL ADVANCEMENT.

Important Activity at Red Cliffs.

IN ORDER TO STUDY improved horticultural methods, it has ben decided to hold a series of lectures and demonstrations at Red Cliffs. This was decided upon at a recent meeting of growers representing the A.D.F.A.,

A Boon to Vignerons!

THE SUNVINE
Mouldboard Plough

This specially designed implement will cut out the strip of ground beneath the vines that is left unploughed by the ordinary plough.

The Beam is turned so that Mouldboard and Share are set out on nearside, and **the land is cultivated right up to the vine stems,** while horse and man walk clear.

Cuts furrow to any reasonable depth and 10 inches wide.

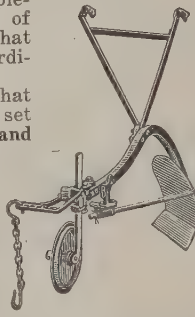
A spring-mounted Fender Rod prevents the share from striking vine stems or posts.

Over 400 Sunvine Ploughs were sold last season.

Price only £4 5 0
Less 5 per cent. for Cash.

Delivery on Rails Sunshine, Sydney, Adelaide, or Perth

H. V. McKAY PTY. LTD.
Sunshine Harvester Works, Sunshine



R.S.A. Finance Board, Citrus Association, and the Water Board.

A strong committee has been formed with Mr. C. H. Cameron as Secretary.

In reply to Mr. Aldred, who raised the question regarding an experimental block at Red Cliffs, Mr. A. V. Lyon (Merbein Research Station) said experiments could be made on different rows with four, six and eight canes, and the growers could thus see the results of various methods of pruning.

Arrangements were made to visit the Merbein Experiment Station.

IMPROVING THE A.D.F.A.

(To the Editor of the "Fruit World.")

Sir,—I claim there is a very large opening for improvement in the Australian Dried Fruits Association. (1) As a voluntary association, it has been a tower of strength to the growers, while output was limited to a small acreage and tonnage; but as the industry expanded and exporting came largely into vogue, the A.D.F.A. became unwieldy as a voluntary union.

Secondly, I claim that if the A.D.F.A. were converted into a selling and distributing agency it would be a greater strength for the growers' benefit. I am fully aware of the fact that I am treading on some one's corns by advocating the change. But consider the benefits that would accrue to the growers by eliminating a considerable part of marketing charges.

I am cognisant of the fact that the change would have to come slowly, at the same time, if it arrived—which I still look forward to—it would be the salvation of the industry, inasmuch as if the levies now paid to all Boards were placed at the disposal of the reconstructed A.D.F.A., they would be in a position to prosecute and push the sales of fruit personally into every home in the Commonwealth and increase the consumption by 50 per cent.

Take for instance tea merchants, car salesmen, and other go-ahead firms—O.T., Preservene Soap, Aspro, etc., these have penetrated foreign markets, besides developing local trade.

Until such times as the growers take command, and place live men with business ability at the head of affairs to push business and be remunerated according to ability, not till then will we get out of the mire

Red Cliffs, 20/5/30. H. J. ALDRED.

NON-SETTING OF ALMONDS.

Mr. Geo. Quinn (Chief Horticultural Instructor) has informed the Eudunda Branch of the Agricultural Bureau that the non-setting of Almond fruits may be due to climatic causes or the lack of cross-pollination of the flowers. Such early blooming sorts as the Brandis—a very erect-growing tree—may have the blossoms injured by frosts or cold cutting rain showers. At Roseworthy College and other similarly exposed places in the Lower North this variety scarcely ever sets a crop. Later flowering kinds, like Peerless and Hatch's Nonpareil, should be substituted if the frostiness of the climate in easly spring is the limiting factor. Apart from this, such early flowering sorts as Brandis, White Nonpareil, Chellaston, and IXL should be grown together, and Hatch's Nonpareil, Ne Plus Ultra, and Peerless, as representing later blooming kinds, to secure effective cross-fertilisation of the flowers.—"South Australian Journal of Agriculture."

NEW SOUTH WALES.

The Griffith Producers' Co-operative Association has decided to make five-year contracts with growers for the handling of citrus fruits. This is to give the fullest protection to those growers who consistently support the company, as otherwise their interests might be prejudiced by those growers who only come in during years of peak production, and who market privately at other times.

The contract gives the grower the right to withdraw in any season, provided notice be given by a specified date.

THE SUGAR BURDEN.

Tasmanian Grower Asks the "Fruit World" to Keep Pegging Away.

(To the Editor, "Fruit World.")

Sir,—I have read with interest your instructive articles on the sugar question. It is simply apalling the manner in which the sugar industry is conducted, inflicting great harm on the fruitgrowers.

I have also read Mr. Townsend's articles on the sugar embargo, but, notwithstanding what he says, he and the method are wrong.

Please keep pegging away at this, and you will be doing something worthwhile.

Good luck, and best wishes.

W. J. YOUNG.

Gravelly Beach, Tasmania.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle Etc.

RUSSIAN APPLES IN GERMANY.

Clash With Australian Shipments.

On May 8 in Hamburg, Australian Apples ex "Port Fremantle" and "Tekoa" clashed with shipments of Apples from America and Russia. Messrs. Timms Gerstenkorn report that the quantities offered were 55,200 boxes Tasmanian and Victorian Apples, 2,400 pkgs. Tas. Pears; 1,900 boxes American Apples; 16,000 boxes and 4,000 barrels **Russian Apples.** The comment regarding the Russian Apples was as follows:—

"This fruit profited by the generally favorable tendency prevailing at this sale. The time for these Apples is definitely past. Nevertheless, this shipment arrived in no worse condition than some of the earlier shipments. Some of the best parcels brought very attractive returns; in fact, better returns than at any time during the season."

A NEW SPRAY and a NEW SPREADER

Crystol-85

The Australian-made White Oil Emulsion.
Containing 85 per cent. by weight
Pure Refined Paraffin Oil.

CRYSTOL-85.
For Use on Citrus and Deciduous Fruit Trees and Plants in Full Leaf, With Perfect Safety.

CRYSTOL-85.
Most Effective in Killing **Red Scale** at Any Season.
Brown Olive Scale in January and February.
Also White Wax Scale and White Louse
Wipes out **Red Spider.**

CRYSTOL-85.
Smothers Codlin Moth Eggs.
And is Valuable in Conjunction with the Usual Arsenate of Lead Programme.
Is Cheaper than some other oil emulsions, and is **More Effective,** as it contains more oil, but at the same time is Absolutely Safe to Use.

CRYSTOL-85.
Of Tremendous Benefit in Combating **Peach and Cherry Aphis,** etc., in Combination with Nicotine Sulphate (Black-Leaf 40).

MANUFACTURED IN AUSTRALIA.

FLUXIT

The New Spreader

Instantly Soluble.

WHAT makes every spray a more efficient spray by transforming it into a colloidal solution?—**FLUXIT.**

WHAT makes a perfect spray that wets thoroughly, spreads uniformly, and clings to the surface?—**FLUXIT.**

WHAT makes the standard amounts of Arsenate used in sprays much more efficient to kill?—**FLUXIT.**

WHAT gives better results with one half pound than one pound of obsolete spreaders did before in Arsenate of Lead sprays?—**FLUXIT.**

WHAT gives Nicotine, Lime Sulphur, and Bordeaux sprays a thicker film, that wets better, stays longer, and makes the Nicotine Sulphate more efficient to kill?—**FLUXIT.**

WHAT makes a much more effective spray of White Oil-Arsenate of Lead combination, by absolutely preventing curdling?—**FLUXIT.**

There is No Substitute for FLUXIT.

Manufactured by Colloidal Products Corporation, San Francisco, U.S.A.

"APPLIM" Brand AGRICULTURAL LIME

BURNT and GROUND. 95% CALCIUM CARBONATE.

PURER, FINER, CHEAPER.

LOWER FREIGHT (railed from Footscray).

Australian Agents:

Lawford's Fruit Exchange Pty. Ltd.

DONCASTER, VICTORIA

Growers! Write for Full Information. Agents Wanted where not represented.

Fruitgrowing in N.S.W.

Orange.

FRUIT was first planted out commercially on the rich basalt soils of Orange, over 50 years ago, and during the supervening years has extended along lines which it can safely be said are without parallel in Australia. This does not mean that the area has increased more rapidly or that it has become an enormous undertaking, such as the irrigation areas, but refers to the wonderfully skilful manner with which suitable types only have been adhered to, creating a degree of fruit standardisation which is potent with commercial values.

When Cherries, for which the district is perhaps most famous, were first planted out, no effort was made or years wasted in attempts to produce any others than those well known to suit trade and local growing conditions, with the result that on 4,000 acres—more than half the area of Cherries in Australasia, only four types are grown. These, too, have been carefully rotated to meet the unvarying demands of a summer market. Early varieties are just sufficient in number to fulfil requirements for such, and these are followed in sequence by the intermediate and then the main, which covers the whole season, and maintains supplies without either break or undue surfeit. Orange follows the Cherry district of Young, and is in that respect a late district. To many growers this might mean a disadvantage, but not to the men of Orange. They know that no matter how the market has opened, their attack will develop along lines of pack and quality, second to none, and have supreme confidence that the general public are merely waiting for their fruits to hit the markets.

Early high prices have made no appeal to these men who look for yield and quality and good average prices through a heavy season, as more profitable in every way than the credit of being first on the market. Their big idea is to be first off it and that they are not wrong is proven by the new zest which enters into the Cherry selling campaign when Orange fruits make an appearance.

The four varieties
are Early Lyons, Napoleon, Florence and St. Margaret, all proven types as every grower knows, and indeed, as every consumer knows. These Cherries from Orange live up to their appearance, being always large, firm and well flavored.

Ripening Tomatoes by Gas.

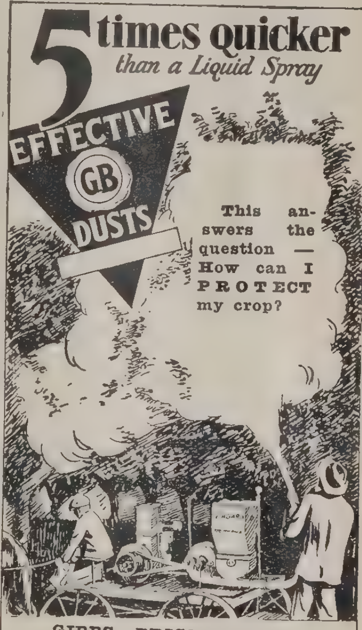
A patent has recently been granted an American professor, Dr. R. H. Harvey, agricultural botanist, University Farm, St. Paul, Minn., U.S.A., for a process of ripening Tomatoes by treatment with ethylene gas. The process is described in "Seed World" as follows:—

All that is necessary in the way of special equipment is a suitable room or chamber and a tank of ethylene gas equipped with a simple flow meter. The meter, plus enough gas to treat several carloads of Tomatoes, will cost only about 30 dols. The gas cost is negligible, ranging from about 40 cents to one dollar a carload. The room or chamber should be closed off so as to make it practically gas-tight. An ordinary plastered room, or cellar room, will work satisfactorily, provided cracks around windows are closed with adhesive tape, and if it has a fairly close-fitting door. Some means should also be available for maintaining a temperature of from 65 to 80 deg. F.

The Tomatoes should be picked when they are beginning to turn or when they are fairly well along toward maturity. In no case should they be picked so green that more than four days is required to ripen them by the gas process. They may be placed in the ripening chamber in baskets, crates, or other containers. The treatment consists of liberating enough gas to make a mixture of one-tenth of one per cent. and closing up the chamber for 24 hours, after which the treatment may be repeated at 24-hour intervals until ripening is completed. Knowing the cubic capacity of any room, measuring the required amount of gas is a simple process by the use of the flow meter and a watch.

Although ethylene gas is inflammable in high concentrations, there is no danger from fire or explosion, provided fire is kept away from the tank during the time the gas is being liberated. The minimum concentration required for combustion of the gas is 30 times higher than the most concentrated mixture used in the Tomato ripening process.

DUSTING



This answers the question — How can I PROTECT my crop?

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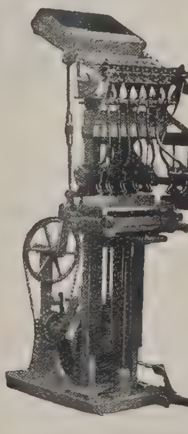

SOLE AGENTS,
GIBBS, BRIGHT & Co.
27 Grenfell Street, ADELAIDE

The Sugar Plunder.

A South Australian Viewpoint.

(By Fred Charlick, Adelaide.)

SOUTH AUSTRALIA is the Cinderella State of the group, and our resources are very limited. No coal, gold, sugar, matches, canned Pineapples, Peanuts, canary seed, etc., and enormous sums are paid out for these commodities to the other States, and the outstanding drain in our exchequer is that of sugar. South Australia is largely a fruit producing State and the high price of 4½d. lb. fixed for sugar places a restriction on the use of fruit for jam-making that amounts to a tragedy. Thousands of cases are allowed to waste each year on this account. The restricted purchasing power of the housewife makes it impossible to make jam when the price of fruit nominally is 1d. per lb and the sugar 4½d., and in consequence South Australia is sacrificed to the sugar embargo. Jam to-day is regarded as a luxury: a 1½ lb. tin costing 10d. when the 2 lb. tin used to be 5d.

Another phase of this high price is the fact that so many storekeepers are unable to purchase the half-ton limit at £37/6/8 a ton, which has to be paid for before delivery, and the result is that in a great many instances the storekeeper has no sugar to supply to his customers.

The last season's crop of sugar amounted to 500,000 tons, 200,000 tons of which were sold or offered for sale at £10 per ton f.o.b. Queensland ports, for mill-white sugars which is semi-refined, and it is a fact that Australian sugar is retailed in London at 2½d. per lb., and again, the C.S.R. Company reduced the price 10/- a ton to New Zealand last week, the price now being £19 a ton in Auckland, and the housewife there pays 1/- for 5 lbs. against 1/10½ in Adelaide. It is estimated by competent authorities that the embargo on sugar costs Australia 7¾ millions per annum, and South Australia's share of this loss is £3,000,000, and I am inclined to think that the latter figure is an over-estimate, in any case, it is over two millions, and it is estimated that 518,000 bales of wool or 30 million bushels of wheat is required to pay the sugar tax for Australia. There are four men who practically control the selling price of sugar. These represent the grower, miller, Government and refiners, and the consumer has no representative and has no say in the amount that he pays out for it as consumer.

It is a known fact that there are 929 colored and foreigners in the sugar industry in the Queensland sugar-belt, and as there are restrictions placed on further cane-fields, those that are cultivated have increased in value to £100 per acre, whilst the adjoining land can be bought for £1.

The Queensland statement as to the number of persons employed in the sugar industry and interests is wrong as, they reckon storekeepers who handle it in their figures, and it is known that the storekeeper makes no profit on it.

Papua is a Commonwealth territory and is producing sugar, and made application to send it to the Commonwealth, but the Minister for Trade and Customs, Mr. Forde, refused to allow it in. At the price that this could be landed into the various States the saving to the people would enable the whole of the people interested in the production of sugar in Queensland, to be kept in idleness on the saving. The fact that all exported sugar shows a loss to Australia on account of the high cost of production against other producing centres means, that what is consumed in Australia has to be sold at the high

Further Reduction in Price of
The Well-known Air Nitrogen Fertiliser
NITROPHOSKA

Price Now :— £20/15/- Per Ton F.O.R. Melbourne

Also Note Improved Composition:

Nitrogen as Nitrate equals	4.5%
,, ,, Ammonia equals	11.5%
Total Nitrogen equals	16.0%
Phosphoric Acid (all soluble) equals	16.5%
Potash equals	**21.5%**

Apply 3-5 lbs. per Full Bearing Tree just before Blossoming.

Such an application will provide, in most cases, all the Phosphate and Potash that the tree requires. **Extra Nitrogen** is best applied in the form of **Green Manure,** and some purely Nitrogenous manure during the setting of Fruit.

ORDER EARLY through your Agent, or direct from Limited Quantities only Available.
Henry H. York & Co. Pty. Ltd., 573-585 Lonsdale St., Melb.
(Late Dyes & Chemicals (Aust.) Ltd.)
Sole Distributors. Write for Pamphlet.

"To Choose the Best is Wisdom"

"LIGHTNING" EQUIPMENT

For the Fruitgrowing Industry is

Universally Used—WHY?

BECAUSE—it is Designed and Manufactured by a Firm
with a Lifetime Experience of Fruitgrowing Conditions.

**When You Buy a "LIGHTNING" you
Buy for all Time.**

Please Note Our New Address:

The "Lightning" Fruit Grader Co.

517 Albion Street, West Brunswick, N. 12. Melbourne

rate to make up the loss, and the disability of this embargo to Adelaide amounts to a tragedy if not plunder, and if the price were reduced to a reasonable amount the cost of living to South Australia in particular would be reduced by 15 per cent.

There is a very strong and bitter feeling in several of the States on account of these conditions, and just lately a league has been formed in N.S.W. expressly to combat the sugar conditions, and they are holding meetings in the large populous centres protesting against the high price charged.

The C.S.R. Company, who really are producers, refiners and financiers, have the biggest say in this everyday item, and the amount of money that they scoop into their coffers on account of this extraordinary position of a company or corporation controlling a necessary everyday commodity is a menace to the people of Australia and should not be tolerated. No concern should have the sole control of an article of food such as this without competition or ordinary trade restrictions.. Their shares are quoted on the Sydney Exchange at up to £33 each, and they made £408,000 last half year and carried forward £100,000 to reserve, and this reserve now totals 1¼ million pounds, and their dividend was 20/- per share. Their ramifications and their money-making opportunity is the most prolific and gigantic of any concern in Australia, and there ought to be a speedy alteration in a number of directions.

I make no apology for these particulars, and notwithstanding any statements to the contrary, I can advance proof to show that they are correct.—"The Garden and Field."

Writing to the "Fruit World" on June 13, Mr. Charlick continues:—

"White Australia a Farce."

The "White Australia" policy as applied to the north is a farce, as I know from observation there are more colored people and foreigners there than in any other part of Australia, and it is a fact that there are 900-odd Italians in the immediate vicinity of the Cairns sugar area, and I have seen large numbers of Greeks, Japs., and Chinese there, beside which, the Queenslander proper is not so much in evidence in the cane business as the rougher element from Sydney and Melbourne, who have been attracted there by the high rate of pay.

Here is another curious phase of the thing:

We import tea in quantities from Java, but we won't take their sugar, which could be landed suitable white quality at £10/10/- a ton at the wharf, Port Adelaide. And here again, I know that sugar can be produced in Australia as cheaply as any other part of the world. I have seen land showing 30 tons of cane to the acre, and the cutters get £12 per week of 44 hours and the mill hands get £6/15/-. Other handlers get £9 per week, and if they work Saturdays and Sundays during flush times they get 25 per cent. more than these amounts. So it is easily seen what a prolific source of income can be got by those engaged in the industry, and at the same time it can be seen from the above facts what a serious drain there is on the depleted exchequer of poor South Australia.

Money is scarce with a large number of suburban storekeepers, and as they have to pay the cash beforehand for half-ton lots of sugar at £37/6/8 a ton, they cannot manage it, and are unable to supply their customers with it.

New Zealand.

NEW ZEALAND FRUITGROWERS' FEDERATION.

THE 14th Annual Conference of the New Zealand Fruitgrowers' Federation Ltd. will be held at Wellington on July 2. The present directors are:—T. C. Brash (President of the Executive), F. W. Cone, J. Dicker, W. J. Rodger, A. M. Robertson, H. Turner, T. H. Torode, W. A. Tate. The manager is Mr. H. E. Napier.

Provincial conferences were held during June at Dunedin, Christchurch, Blenheim, Auckland, and Hastings.

In the annual report of the directors the following is stated:—The sales for the year total £120,000, an increase of £10,000 on the previous year. The nett profit of £2,700 brings the accumulated funds of the Federation up to £16,700.

The Advisory Boards in various parts were working well. The deficiency of £803 on orchard tax account was charged to profit and loss account. The directors were devising a system acceptable to the Treasury and by which cost of collection would be reduced. Two districts—Poverty Bay and Nelson—had made a fireblight tax collection.

A special committee, with Mr. W. A. Tate as Chairman, was studying local markets—the biggest problem of the industry. Compulsory standardisation was imperative. The Federation had arranged for the opportunity for gift fruit for friends in England—a case of extra fancy grade New Zealand Apples being delivered at the cost of 20/- per case. This scheme had wonderful advertising possibilities. Good results had attended the first efforts. There was room for much extension.

The Cawthron Institute was subsidised to the extent of £150 to study the Bronze Beetle and Earwig.

Duty on Imported Jam.—In response to repeated requests, the Government was taking definite steps, recognising that the New Zealand fruitgrowing industry required protection from South African jams. For New Zealand to depend on large quantities of imported jams was nothing short of ridiculous.

The balance-sheet shows accumulated capital of £16,700; bank overdraft, £37,250; sundry creditors, £8,184; and other items make a total on the liability side of £64,016. On the asets side:—Sundry debtors £48,500 and stock on hand £14,000, are the principal items. The trading account shows a gross profit of £2,724. Of the amount collected by orchard tax £1,377, the sum of £662 was shown as cost of collection, leaving a nett credit of £715.

The agenda paper for the Conference revealed a wide range of subjects, including:—Alterations to constitution, legislative items, requests for duties; cases and containers, railway items, local markets, export matters, research work, etc.

A report will be published in our next issue.

Bathing the Baby.

"Now, Mary, when you bath the baby, be sure and use the thermometer to test the water."

Returning an hour later, the mistress asked: "Did you use the thermometer?"

"No, ma'am. I can tell without that. If it's too hot, the baby turns red, and if it's too cold, he'll turn blue."

NEW ZEALAND EXPORTS.

The New Zealand fruit export season closed on May 31, details of shipments from the various centres being as follows:—

Auckland	103,000
Hastings	248,000
Poverty Bay	22,000
Wairarapa	21,000
Marlborough	54,000
Nelson	780,000
Canterbury	1,000
Otago	99,000
Total	1,328,000

23,000 cases additional were held in store for shipment to South America.—"N.Z. Orchardist."

NEW ZEALAND JOTTINGS.

(By Geo. A. Green, N.D.H., Auckland, N.Z.)

The Root Stock Question.

The question of the most suitable root stocks to use for fruit trees, Roses, and other plants, is one which has a wide bearing on our horticultural development. Much research has been carried out at East Malling, England, and elsewhere, especially on certain types of Apple stocks, but as yet little organised effort has been done in New Zealand.

Value of Discussion.

The papers read at the N.Z. Horticultural Trades Association's conference both last year and this year, have created an interest far beyond our shores, quite a number of papers in Australia and beyond, have referred to the matter, and the papers themselves have been reprinted almost wholely. The matter is being brought before the N.Z. Fruitgrowers' Conference by remit, and no doubt will receive such consideration as time will allow.

Transfer of Mr. W. K. Dallas, N.D.H. (N.Z.).

Mr. Dallas, who was formerly the Chief Orchard Instructor at Christchurch, and recently has been in the same capacity in Dunedin, has been transferred to Palmerston North, where it is understood he will be engaged in horticultural research and experimental work. Mr. Dallas's training, qualification, and taste, all fit him for his new appointment.

Mr. G. H. McIndoe, N.D.H. (N.Z.).

Word has been received that this officer, who is deservedly popular, has received a well-earned promotion, having been appointed Orchard Instructor at Dunedin; this is a first-grade station. While his old old friends at Gisborne are sorry to loose Mr. McIndoe, they realise that the transfer means promotion, which is well deserved, and wish him well in his new sphere.

Gisborne's New Instructor Appointed.

Mr. T. Everett, till recently tobacco instructor in the Rotorua district, has been transferred to Gisborne district as Orchard Instructor, in place of Mr. G. McIndoe, who has been transferred to Dunedin. Mr. Everett has been in the service of the Horticulture Division for a number of years, having been Orchard Instructor at Whangarei and Thames respectively, before undertaking the tobacco work.

COMMERCIAL ITEMS.

Dehydrated Products.

Swallow & Ariell (Dehydrated Products) Pty. Ltd., have registered with a capital of £50,000. This company is a subsidiary of Swallow & Ariell Ltd., and has been formed for the purpose of keeping this branch of its business separate from the usual trading side of the enterprise. The parent company has carried on an extensive business in dried vegetables, and has plants at Dandenong and Port Melbourne for dehydrating vegetables and fruits. About 12 months ago it acquired the business of Dehydrated Food Products (Australia) Pty. at Dandenong. Names subscribed to memorandum: James Clason Gates, 1 share; George Keith Aikman, 1 share; Charles Russell Gabb, 1 share; Frederick John Derham, 1 share.

Australian Tobacco Plantations Ltd. Registered office, 434 Collins-street, Melbourne. Registered June 11. Capital, £50,000 in £1 shares. Names subscribed to memorandum: Robert Nicholson Corney, 250 shares; Temple Alsop Jennings Smith, 250 shares; William Kennedy Burnside, 250 shares; Ronald Buchan, 250 shares; Arthur John Lewis Eckersley, 250 shares.

Australian Gypsum Products Pty. Ltd. Registered June 17. Objects: To acquire and amalgamate The Victor Electric Plaster Mills Pty. Ltd., The Australian Gypsum Ltd., Peninsula Plaster Co. Pty. Ltd., Waratah Gypsum Pty. Ltd., and The Australian Plaster Co. Ltd. Capital, £750,000 in £1 shares. Names subscribed to memorandum: George Hayes Limb, 1 share; William Aloysius Anderson, 1 share; William Robert Drayton Innes, 1 share; James Arthur Boyd and Frederick James Smith are also directors.

Liquidations.

Maryborough District Cool Stores & Ice Works Co. Pty. Ltd. (vol.), May 16. R. E. Harding, liquidator, State Treasury, Melbourne.

SOFTWOOD SHOOKS.

No Embargo At Present.

THE efforts put forth by representatives of the fruit industry to prevent an embargo on box shooks have been successful. Evidently the Tariff Board were fully seized of the problems facing the fresh fruits industry, as they reported in favor of the case put forward by the fruit industry.

The schedule of new tariff items was published in mid-June, and as soon as this has been ratified by Parliament, fruitgrowers' associations will assuredly press for permission to import Apple box shooks under item 404 10 per cent ad val. duty to be refunded when exported.

The duty on timber for the making of boxes in Australia has been increased to 1/- per 100 super feet, approximately ½d. per box. This, in the opinion of Mr. C. H. Tutton, will increase the cost of boxes in Australia, as in the past boards have been imported for the manufacture of cases.

CODLIN MOTH PARASITE.

A CONSIGNMENT of the codlin moth parasite (Trichogramma minutum) arrived in Melbourne by the Aberdeen and Commonwealth liner "Moreton Bay" early in June.

This parasite was brought here by the Council for Scientific and Industrial Research. Extensive field experiments will be made with this parasite to combat the codlin moth, and if successful it will be distributed throughout Australia.

This parasite was noted in California by Mr. W. Ranger on his recent visit there, and it is hoped the parasite will prove beneficial.

Remembering the good work of the woolly aphis parasite (Aphelinus mali), fruitgrowers are keenly interested in the possibilities of the codlin moth parasite.

The Superintendent of Horticulture for Victoria (Mr. Ward) recently estimated that the codlin moth cost growers over £400,000 per year for spraying against the moth and for the fruit destroyed by the pest.

To Tomato Growers and others——

WINDOLITE

UNBREAKABLE GLASS SUBSTITUTE,
admits ULTRA VIOLET RAYS (ordinary glass does not), and is frost, rain and weather proof—keeps out the cold and wet.

"WINDOLITE" means early fruit and more fruit, as it ensures strong, robust, healthy and rapid growth by admitting all the sunlight and the vitalising, health-giving Rays. These Rays mean better fruit.

Windolite has stood the test for years under the severe English climatic conditions.

Windolite is light, flexible, easy to cut and fix. No heavy and expensive framework required.

WINDOLITE for universal Use

Sold in 36in. Width; cut to any length at 9/- per sq. yard, by the following Melbourne Firms:—

JAS. McEWAN CO. PTY. LTD.
D. & W. CHANDLER LTD. (and at Fitzroy).
MYER EMPORIUM LTD.

Ask your storekeeper to get it.

Write for sample and particulars to the Australian Agents:

C. H. LEAVER & CO.,
524 Collins Street, Melbourne.

-LEMONS-

We are the largest Buyers in Australasia

C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

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Insecticide and Fungicide
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The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,

Advertising in this Journal.

NEW SOUTH WALES.

Sydney:
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

Melbourne:
Andrew, Fred. J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
Silbert, Sharp & Davies, Western Market.
Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.

Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.
Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.

London:
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.
Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.
Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers
Johnson, T. S., & Co.
Bristol and Southampton:
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.
Glasgow:
Russell, Turnbull & Co.

FRANCE.

Scheiber, E., Paris.

GERMANY.

Bremen:
Fruchthandel, Gesellschaft.
Hamburg:
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.

Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

London Prices.

Messrs. Barker, Green & Parke Pty. Ltd., 533 Collins-street, Melbourne, advise on June 4 having received cable from Messrs. Simons & Co., London:—"Port Bowen"—Granny Smith, 15/6 to 21/-; Jon., 9/6 to 11/6; Dunn's, Stones and Sturmers, 10/- to 13/6; Cleo., Del., 10/6 to 12/-.

Mr. H. G. Colombie, Temple Court, Melbourne, has sent copies of cables showing prices received from M. Isaacs & Sons on June 6 for fruit cargoes ex "Cathay, "Fordsdale," "Balranald," "Orontes," "Port Bowen," and "Port Alma." Vic., G.S., 15/3 to 21/-; Jon., 8/- to 12/-; Del., 9/- to 11/6; Cleo., 8/6 to 12/9. Tas. Cox, 12/- to 21/6; Jon., 8/- to 11/3; Cleo., 8/6 to 12/9; Sturmer, 9/6 to 12/6.

Pears, ex "Cathay," were very ripe—prices (cases) Packham, 6/- to 13/-; Jos., 9/- to 13/6; Bosc, 7/3 to 14/6; ½ cases, W.N., 6/6; trays, Jos., 5/9; W.N., 4/6 to 5/3; Keiffer, 4/- to 6/-.

As the English crop of Strawberries and Cherries is large, this is expected to affect the demand for Apples.

Liverpool (23/6/30).—Messrs. McGeorge & Jardine, Liverpool, cabled that the market was weak for Apples ex "Trojan Star" and "Ulysses." Aust. R.B. realised 8/- to 9/6; Jon., 8/3 to 9/3; Tas. Cleo., 9/- to 13/9; Jon., 7/- to 10/-; Sturmer, 9/- to 10/-,

Hamburg.—Sales catalogues to hand from J. H. Lutten & Sohn, 30/4/30.—W.A, Jons,, average 12/- to 14/-; Cleos., 15/- to 17/-; Dunn's, 17/- to 18/-; special lots, 23/- to 28/-. S.A. Jons., average 13/- to 14/-; Cleos., 14/- to 16/-; Dunn's, 16/- to 18/-. W.A. Apples were colored clean and perfect; S.A. fruit excellent, just turning color.

Ph. Astheimer & Sohn, Hamburg, have sent catalogue giving details of 17,000 cases Australasian Apples sold by auction on April 30. Good prices were realised. In an accompanying report appreciation is expressed for the quality of the Apples and Pears sent.

Messrs. J. C. Houghton & Co., of Liverpool and London, have sent details of sales at Liverpool on May 7. Australian Apples, ex "Nestor."—Tas. Alf., 10/- to 12/9; Vic. Jons., 10/- to 13/3; Porto Rico Grapefruit, 96's, 25/6 to 31/-; Sicilian Lemons, Naples, 13/6 to 22/6.

SOUTH AUSTRALIAN FRUIT IN LONDON.

Mr. G. A. W. Pope, general manager of the Government Produce Department, Adelaide, reported on June 19 having received a cable from the Trade Commissioner for South Australia in London (Mr. R. M. K. Lewis), stating that the bulk of the Apples ex "Ballarat" were in satisfactory condition. Growers had been anxious about this shipment since it was known she had struck a submerged object in the Suez Canal and run aground in the Thames. Prices steady. Sturmers, 12/- to 12/6; Cleos., 11/- to 11/6; Rokewoods, 11/- to 11/6; Jons., 10/- to 10/6; R.B., 10/- to 10/6; Nickajack, 10/- to 10/6 per case.

Adelaide, 17/6/30.

The general manager of the Government Produce Department (Mr. G. A. W. Pope), stated that the latest cable from the Trade Commissioner for South Australia in London (Mr. R. M. K. Lewis) advises that the Apples shipped by the "Cathay," "Esperance Bay," "Port Hunter," "Orama," and "Natia" have all arrived during the past week, and the fruit is opening out satisfactorily, the market is gradually falling because of the large quantities coming to hand.

The "Natia" at Hamburg has a large quantity of Apples on consignment. S. Aust. Apples are selling as follows:—Jons., 9/3 to 11/3 per case; Londons, 8/- to 10/-; Cleos., 11/- to 14/6; others, 8/- to 12/-.

There is still a good demand in London at prices as follows:—Cleos., 11/- to 12/6 per case; Jons., 8/- to 10/6; Sturmers, 10/6 to 12/-; others, 8/- to 10/6.

HAMBURG.

Copies of catalogues to hand from Messrs. Timm & Gerstenkorn, giving details of various sales of Australian fruit.

J. H. Lutten & Sohn, Hamburg, also sent catalogues, giving details of sales.

New Zealand.

Dunedin, 12/6/30.—Reilly's Central Produce Mart reports.—Apples, Del., 10/- to 12/-; Jon., 6/- to 7/6: other desserts, 5/- to 6/-; Sturmers, 8/- to 9/-; cooking, 4/6 to 6/6. Pears, Winter Coles, 6/- to 8/-; Nelis, 6/- to 9/- half-cases 2/- to 4/-; other desserts, 4/- to 5/-. American Valencias, 50/-; N.S.W., 15/- to 20/-. Navels, N.S.W., choice 22/6, medium 21/- Mission Lemons, 55/-; Australian, 27/6. Island Oranges, choice repacks, 18/-.

Sydney (21/6/30).—Mr. F. Chilton, City Fruit Markets, Sydney, reports as follows:—

Queensland Fruits.—Bananas, 12/- to 23/- per case; Pines (Queens), 8/- to 11/-; Tomatoes, 3/- to 6/- per half-case; Custard Apples, 3/- to 5/- per tray.

N.S.W. Fruits.—Bananas, 12/- to 23/- per case; Oranges (commons), 3/- to 5/- per bus., (Navels), 6/- to 8/-; Sevilles, 4/- to 5/-; Mandarins, 4/- to 7/-; Lemons, 4/- to 8/-; Apples (R.B.), 5/- to 9/-, (G.S.) 7/- to 12/-; Pears, Packham, 8/- to 11/-, W.C. 5/- to 10/-; Passions, 8/- to 13/- per half-case; Grapes, Black Cornichon, 6/- to 8/- per half-case, White Ohanez, 4/- to 5/-.

Victorian Fruits.—Apples, Jon., 6/- to 8/- per bus.; Pears, Packham, 6/- to 10/-; Howell, 5/- to 8/-; B.B., 5/- to 7/-.

Tasmanian Fruits.—Apples, Jon., 5/- to 9/- per bus. case; S.P.M., 5/- to 8/-; G.F., 5/- to 8/-; T.P., 5/- to 7/-; N.Y.P., 4/- to 8/-; F.C., 4/- to 8/-; Pears, W. Cole, 5/- to 10/-; Jos., 6/- to 10/-; G.M., 5/- to 8/-; Giblin, 3/- to 6/-; Easter Beurre, 4/- to 7/-. (Corresponding prices for half-cases.)

The market for Apples shows a slight tendency to improve, especially for varieties and sizes in popular favor.

Citrus fruits and Tomatoes are plentifully supplied and meeting a poor demand.

The demand for Bananas and Pines is moderate.

Tasmania.

Hobart (28/6/30).—Apples, 1/3 to 4/- per case; Pears, 9d. to 2/6 per case.

South Australia.

Adelaide (28/6/30).—Apples (eating), 4/- to 5/- case; (cooking), 3/- case. Grapes, 9/- case. Lemons, 8/- to 9/- case. Oranges (common), 7/- case; do., blood, 8/- case; navels, 10/- to 11/- per case; poorman, 6/- case. Pears, eating, 4/- to 5/- case; do., cooking, 3/- case. Persimmons, 12/- case. Pineapples, 12/- to 13/- case.

Victoria.

Melbourne.—The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market on June 30 for average quality fruit:—Apples, good to choice eating, 3/- to 6/-; cooking, 2/6 to 5/-; few late varieties higher. Bananas, green, Queensland, special, and choice, 23/-, odd lots 24/-; standard, 17/- to 22/-; plains, 13/- to 16/- per double case; rust affected lines lower; market weak. Custard Apples, Queensland, 3/- to 5/- half-case. Lemons, 5/- to 8/- per case; demand poor. Mandarins, 7/- to 9/-, small down to 5/-; Oranges, common, bulk, 4/- to 5/6 per case; Mildura, 6/- to 7/-; navel Oranges, 6/- to 9/-; best Mildura and South Australian slightly higher. Passion Fruit, 18/- per case, few specials higher. Papaws, 12/- per double case. Pineapples, Queensland, 8/- to 10/- per case; weak market. Grape Fruit, Victorian, 11/- to 14/-; Queensland, 11/- per case.

The Melbourne manager of the Federal Citrus Council of Australia reports that sales were as follow:—Navel Oranges, average standard, shed pack navels, 8/- to 9/- a case; South Australian and best Victorian, 10/- to 11/-, some selected wrapped lines higher; common Oranges, 6/- to 8/-. Mandarins, 7/- to 10/-, a few specials higher; small and immature difficult of sale. Lemons, medium sizes, to 8/-; small or marked, from 5/-. Grape Fruit, 11/- to 14/-, a few specials, 18/-; other varieties lower. Poor man's Oranges, 10/-.

Queensland.

Brisbane (26/6/30).—Tas. Apples, Jon., 10/- to 12/- per case; French Crabs, 9/- to 10/-; S.P.M., 9/- to 10/-; Del., 9/- to 10/-. Tas. Pears, B.B., 8/- to 9/- per case; W.M., best 10/-, small 7/- per case. Vic. Pears, W.C. and W.W., 9/- to 12/- per case; P.T., 11/- to 12/-; B.B., 7/- to 10/-; W.D., 9/-; Howells, 9/- to 11/-; Keiffers, 7/- to 9/- per case. Vic. Apples, Jon., 10/- to 12/- per case; Statesman, 8/- to 9/-; R.B., 9/- to 10/6; Five Crowns, 6/- to 7/-; Mandarins, Glens, 7/- to 10/- per case; Emperors, 3/- to 5/-; Scarlets, 4/- to 6/-; Lemons, 1/- to 3/- case; Custard Apples, from 1/- to 2/6; Papaws, per dump case 4/- to 5/-. Oranges, 4/- to 7/6 per case.

MARKETING FRUIT IN ENGLAND.

Mr. J. P. Piggott, M.H.A., of Tasmania, now visiting London, recently directed attention to difficulties facing the Australian fruit export trade. The fact of the Australian States and New Zealand acting separately regarding the quantities of fruit to the various markets was detrimental to the producers.

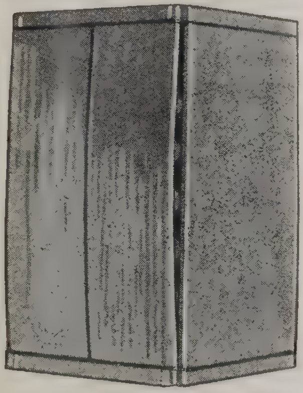
Mr. Piggott visited English and Continental markets. He states the hardwood case is superior to the softwood. Australian fruit going to Germany paid a duty of 1/5 per case more than fruit from New Zealand, because of the lack of a reciprocal trade arrangement with Germany.

Canadian Standard Cases

C. H. TUTTON Pty. Ltd.

ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE

Telephone: F 3148 (3 lines). **Telegraphic Address: "TUTBOX."**



Canadian Standard Bushel Case as used in Canada, America, N.Z.

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
2. Half rail freight of Hardwood cases.
3. All timber cut to exact sizes, making it an easy matter to assemble a symmetrical case.
4. Preferred by 90 per cent. English and Continental Buyers.
5. Scientifically designed to eliminate bruising in transit, thereby reducing waste.
6. Brings Better Returns.

PERSONAL.

Dr. S. S. Cameron, Director of Agriculture for Victoria, who has been ill for a long time in a private hospital, is making excellent progress towards recovery. He is expected to leave the hospital about mid-July.

* * * * *

Mr. A. W. Palfreyman, managing director of the Australasian Jam Co. Pty. Ltd., and Mr. F. H. Peacock (H. Jones & Co. Ltd., Hobart), sailed for Africa on June 30.

* * * * *

Mr. J. A. Parkes, manager, Victorian Central Citrus Association, left for Sydney at the end of June en route to New Zealand. Mr. Parkes will be studying the New Zealand market in relation to supplies of citrus from Australia.

* * * *

Mr. T. E. Butler, who is Secretary for Harcourt Fruitgrowers' Progress Association Ltd., and the Peninsula Co-operative Fruitgrowers' Association Ltd., and several cool store companies, has just returned from a business trip to Queensland, where he has been looking into the question of increasing the Apple trade in that State.

* * * * *

Mr. Claude D. Browne, representing the "Clensel" spray organisation, also John Brunning & Sons, nurserymen, is visiting the Murrumbidgee irrigation areas during June and early July.

* * * * *

Mr. W. L. Gregory, representing the Gerrard Wire Tying Machines Co. Ltd., visited Leeton, Griffith, Pericoota, and other fruitgrowing centres in N.S.W., also Northern Victorian districts, during June.

Oranges for Miss Amy Johnson.

The Mildura District Citrus Association sent a case of their Oranges under the "Big Four" brand to Miss Amy Johnson at Menzies' Hotel, Melbourne.

MARKETS IN THE EAST.

Major A. F. Simpson, Bombay, who spent 25 years in India, states there is a very big market in India, Ceylon, Burma, and the Federated Malay States for Australian canned fruits and other goods.

EMPIRE MARKETING BOARD.

Valuable Work Revealed in Annual Report.

THE fourth annual report of the Empire Marketing Board, which covers the year ending May 31, 1930, is just to hand. The Board reports that there has been substantial progress in all methods of marketing. A hopeful outlook of the situation is taken. "There has without question been a marked advance" (states the report) "in the habit of Empire buying in Great Britain in the past year."

The purpose of the Empire Marketing Board is to improve the quality and increase the quantity of Empire products marketed in the United Kingdom and to make Empire buying a national habit. In creating this Empire sentiment the distant Dominions have received considerable benefit. Grants have been made for research into animal and plant problems, cold storage, etc. A full list is contained in the report. Systematic trade surveys are made, and weekly intelligence notes are published.

The Board has adopted a valuable programme of nationwide advertising on comprehensive and satisfactory lines. The report is printed and published by His Majesty's Stationery Office, London. Copies (which are obtainable at 1/- each) are well worth the perusal of thoughtful people.

LEMONS AND ORANGES IN BRISBANE.

We acknowledge having received from Mr. Hedley Geeves, Brisbane, a very interesting review of the Lemon situation in Brisbane, together with a graph showing marketing fluctuations. The opinion is firmly held that there should be no need to import Lemons, but that Australian Lemons can supply the market all the year round.

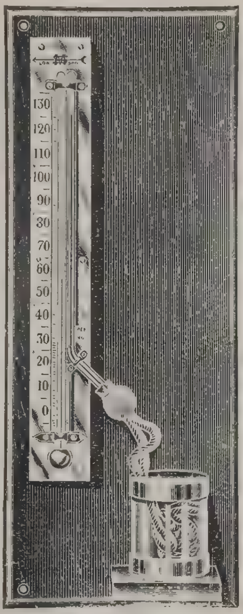
Mr. Geeves also sent a specimen of a very attractive poster issued by the Committee of Direction of Fruit Marketing—advertising to increase fruit consumption.

In conjunction with the Griffith Producers' Co-operative Association, Griffith, N.S.W., a neat window design has been worked out to advertise "Excello" Oranges. The numerals on the left-hand side are moveable, making it readily possible, as desired, to announce Oranges at 3, 4, 5, 6 or 8 for 1/-.

CODLIN MOTH CONTROL.

Messrs. Lawford's Fruit Exchange, Doncaster, Vic., advises that the latest American scientific practice in dealing with codlin moth is that of using Fluxit Fixators. Lead Arsenate alone is stated to be unable to control the codlin moth, hence the introduction by the scientific Fixators to make lead arsenate more effective.

"Better Fruit," U.S.A., for April, 1930, includes an interesting article entitled "Worm Instinct Challenges Science," by F. J. Littooy, asking a series of questions which are baffling fruitgrowers and scientists and presenting the spray control programme from an entirely new angle. The necessity for a complete arsenate coverage is emphasised.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The Wonderful Flame Throwing Machine with a controlled flame 2ft. wide, 10ins. deep and 3ins. thick of 450 degrees of heat that kills the weeds, seed and insects WITHOUT INJURY to the trees.

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Mellor Street - - Gympie - - Queensland

Price £10 F.O.R. **Correspondence**

PEAR BLIGHT IN CALIFORNIA.

Every one of the leading Pear-growing sections report the prevalence of Pear blight, states the Agricultural Statistician of the California Department of Agriculture on May 10. In some areas the position is quite serious, there having been a rapid development of blight during the past 10 days.

PRESERVING BERRIES.

The Frozen Pack Method of Preserving Berries in the Pacific North-West.

A VERY interesting bulletin is to hand from the U.S. Department of Agriculture, dealing with the frozen pack method of preserving berries in the Pacific North-West of U.S.A.

Strawberries, Raspberries, and Loganberries are placed in barrels with sugar and frozen.

The trade is a very large one. This valuable bulletin deals in a technical manner with the process: it is written by Messrs. H. C. Diehl (Plant Physiologist), J. R. Magness (Pomologist), C. R. Gross, and V. B. Bonney (chemists).

THE SUGAR AGREEMENT.

Grossly Inequitable.
Fruit Industry Seriously Hampered.

Says the Melbourne "Age" of June 5:—

"Wherever fruitgrowers or housewives foregather there are indignant protests against the incubus of the sugar embargo. At no time have orchardists been in such a desperate position as they are to-day; it is many years since housewives were forced to economise so dractically. . . . . The sugar interests alone remain on "prosperity peak." . . . . The gross inequity of the existing agreement has become so obvious as to be beyond dispute. Its hampering effect on the fruit industry, and the crushing burden it imposes on the whole community . . . now makes imperative its abandonment. . . . . The issue is certain to take a place in the forefront of Federal politics."

L. P. Rosen & Son, Fernhill Nurseries

Are now booking orders for all kinds of Fruit Trees, including Citrus, of which 100,000 are available, and can supply some 10,000 Valencias, grown from buds supplied by the N.S.W. Bud Selection Society. Prices and quotations on application.

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Interest: 6 Per Cent. *Price of Issue: Par.*

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Interest at 6 per cent. per annum will be paid from the date of lodgment of moneys, and the first interest payment will be made on 15th November, 1930.

Interest will be subject to Commonwealth Income Tax, but free of all State Income Taxes.

Applications may be lodged at any Bank, Savings Bank, Money Order Post Office, or with any Member of a recognised Stock Exchange.

EDWARD G. THEODORE,
TREASURER.

COMMONWEALTH TREASURY

SQUARE—OR HEXAGONAL?

When Laying Out an Orchard.

WHETHER the square or the hexagonal system should be followed when laying out an orchard is a matter of frequent contention. The hexagonal system certainly does offer three main ways of working, against only two ways in the square system, and sometimes this has a distinct advantage on steep hillsides. It is unwise, however (states the Department of Agriculture of N.S.W.), to rely solely upon this, and on such hillsides it is far wiser to lay out in blocks, altering the direction of the rows according to the contour in each block.

Given the same distance between trees, more trees are accommodated in a given area by the hexagonal method than by the square method, but it is wiser to base the number of trees per acre on the carrying capacity of the land and other conditions, and to adhere to that number whatever system of layout is adopted.

For instance, if it has been found under certain conditions that certain trees are satisfactory when planted 24 feet apart on the square system (which, discarding fractions, gives 75 trees per acre), and it is intended to plant more of such trees under similar conditions but on the hexagonal system, then it is better to space them at a distance that will give approximately the same number per acre, which means that they will be 25 feet 9 inches apart.

As already mentioned, when laying out an orchard on a slope liable to wash during heavy rains, the area should be divided into blocks according to the contour of the land and the direction of the rows fixed accordingly, so that the furrows left in ploughing or cultivating, when carried out in one direction, will carry the water they collect at an easy grade.

Sufficient surface retaining drains

should also be provided at an easy grade to prevent heavy flows of water over the cultivated ground. These drains should be made before planting, as too often when put off till later serious damage is done before the work is carried out.

PLANTING FRUIT TREES.

Some Useful Hints.

THE ROOTS OF DECIDUOUS trees commence growing in the spring long before there is any move in the tops. The trees should be in their permanent positions when this first root movement takes place.

* * * * *

Early planting therefore (say, June and early July), is recommended. Deciduous fruit trees, however, may be planted till August or early September in some localities.

* * * * *

Well-grown trees, one year from bud or graft, with well-developed roots are most desirable.

* * * * *

As long roots are very troublesome to settle satisfactorily when planting, it is better to cut them back to about 8 inches.

M. ASVARISCH

FRUIT BROKER

Copenhagen - Denmark

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Telegraphic Address: Asvarisch, Copenhagen.

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All Sorts of Deciduous and Citrus, Including
Valencia, Washington, Grape Fruit, Lemons.
All Citrus are Raised on New Land with a Wonderfully Fibrus Root System.
Limited quantities of Valencia available from N.S.W. Bud Selection Society's Selected Wood.

Quality Prime for 1930 ORDERS NOW BEING BOOKED Get Our Prices

F. FERGUSON & SON

Australian Nurseries also at Camden *Hurstville* N.S.W.

The bottom of the hole should have a crown in the centre so that the roots can be spread out with a downward tendency.

* * * * *

To settle the roots firmly it is very important to fill in the hole with fine soil, ramming firmly with the heel as the hole is filled in.

* * * * *

Cut the tree back to the desired height after planting.

If planting when the soil is dry cannot be avoided, the holes should not be completely filled, and each tree should receive several gallons of water; when that has completely soaked away the hole should be filled up with dry, loose soil.

* * * * *

A watering in this way is very useful in settling the soil around the roots, but be careful to avoid tramping close around the tree while the soil is soaked.

GLASS CLOTH
CHEAPER THAN GLASS
For POULTRY & PLANTS
USE THE ULTRA-VIOLET RAYS

3/- per sq. yard.

The name Glass Cloth is imprinted on every yard.

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Personal supervision of every consignment.

Cheques posted promptly.

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Fruitgrowers!—This is the Show at which you should exhibit

ADVERTISE your PRODUCE—IT PAYS

Over £400

is offered in PRIZE MONEY, in addition to FOUR HANDSOME SHIELDS

ENTRIES CLOSE Saturday, 16th August, AT NOON

Prize Schedules, Entry Forms, etc., on application to—

HENRY SCHWIEGER, Manager,

Temple Court, 422 Collins Street, Melbourne.

Control Orchard Pests Scientifically with

VOLCK

READ WHAT GROWERS SAY:—

Mr. R. E. Fowler, of Pomonal, who won the Apple Export Grand Championship of Australia for the Best Five Cases Apples, for export overseas, says, 22/3/30:—

"For myself, I may say that VOLCK is all that the manufacturers claim it to be. It is clean to use, effective in results, and safe under almost any conditions. In reference to this last, I used VOLCK at a strength of 1½ gallons in 100 gallons of water applied on March 1, which was a hot day, to Jonathans that were ready to pick, but which I wished to leave for another two or three weeks. There was not the slightest injury to fruit or foliage; and these Apples when picked showed complete protection from the attack of late broods of codlin moth. I shall certainly use larger quantities of VOLCK next year."

Mr. W. J. Cox, Pomonal, writes as follows, 17/3/30:—

"I have given VOLCK a trial on two acres of Esopus Spitzenberg Apples. I used ¾ of a gallon of VOLCK and 2½ lbs. Arsenate to 50 gallons of water for four sprays; the result is very satisfactory. I selected the Esopus for a trial, as they carried a fair crop last year, when the moth was so bad. I find it an excellent spray for Cherry Aphis when mixed with Nicotine Sulphate; with four sprayings the trees are perfectly clean."

Mr. H. G. Petty, Templestowe, writes:—

"I have used your Oil Orthol-K in combination with Arsenate of Lead on all my Apples during the past season. Results have been excellent, fruit and foliage being particularly bright and clean. Codlin Moth infestation has been negligible—the lowest yet experienced The most gratifying result of using Oil is the reduction in the number of stings and the complete control of Red Spider This alone I consider warrants the use of your Oil again."

An extract from a letter received from Mr. R. K. Bazley, Ardmona, 17/2/30, reads:—

"I might state that I had splendid results both as a check for red spider and codlin control. These results were very pronounced, and can be verified by local fruit inspector. Next season I intend using as a control for aphis (green)."

A letter from Mr. D. Roberts, Narre Warren, 26/5/30, reads:—

"In regard to the VOLCK Oil purchased from you, I think it is very effective in controlling the late brood of grubs. I used it as a last spray, and the fruit had a much finer appearance than that which I sprayed with lead only. I found that the leaves kept greener much longer than those sprayed with lead. I can recommend it for a very late spray, and would like to try it out with lead for the earlier sprays."

The Irymple Packing Pty. Ltd., Irymple, 14/5/30:

"We are pleased to advise you that the use of VOLCK as a citrus spray is becoming much more general in this district. VOLCK is now looked upon as the essential spray for citrus fruits. During the past two seasons growers have had wonderful success with this mixture. We hope to do substantial business in this line this season."

Messrs. J. Hammond & Sons, Officer, write, 15/4/30:—

"Having used VOLCK extensively this season, I can testify to its effectiveness. Without a doubt, I can safely state that in my orchard we have had much less than 1 per cent. codlin. I feel sure that if properly applied VOLCK will put hundreds of pounds into the growers' pockets. I should like you or your representative to see the fruit we are now handling; there is nothing better in Australia."

For official results of tests conducted by the Department of Agriculture:—

CODLIN MOTH CONTROL.—See Journal of Agriculture, 1928, page 461.

CODLIN MOTH CONTROL.—1928-29, see Journal of Agriculture, September, 1929.

RED SCALE.—On citrus trees, see Journal of Agriculture, October, 1929, pages 596-98.

PEACH APHIS AT SHEPPARTON.—In conjunction with Nicotine Sulphate, see "Argus," October 16, page 18.

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There is NO SUBSTITUTE for

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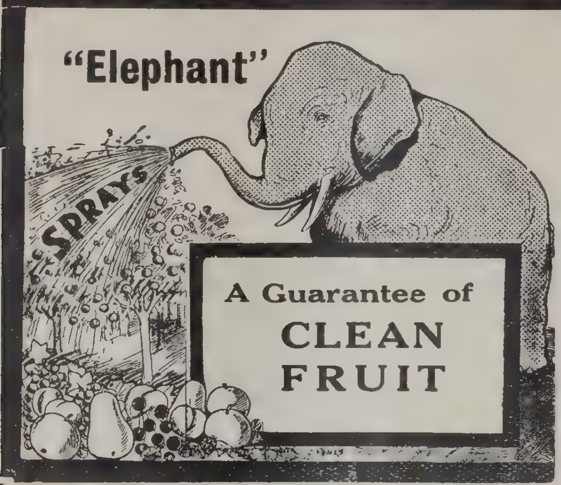

ORCHARDISTS

See Journal of Agriculture—July 1930

Spraying is essential, and your best Insurance. Therefore it is necessary to use only the Best Sprays obtainable.

Wipe out as many pests as possible and have less to contend with during the Summer months.

Recent Tests at Doncaster and Templestowe [Vic.]

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"FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of Each Month.

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Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printers' MSS.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is **8/6**. All other places, **10/6**, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

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"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States

Changes of copy for advertisements must be in our hands on or before the 12th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement notwithstanding the fact that a contract may have been entered into for the use of a certain space.

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E. H. WRAGG, Secretary and Advertising Manager.

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"THE EXPORT OF APPLES."

Valuable Bulletin Issed by Victorian Department of Agriculture.

A NICELY illustrated booklet has just been issued by the Victorian Department of Agriculture, giving helpful information relative to Apple export — varieties—grading—packing hints and charts—cases, labelling and stencilling—abbreviations for varieties—grading regulations—temperatures in ships' holds. The illustrations show the various packs. Altogether it is a valuable production. The authors are Messrs. J. M. Ward, Supt. of Horticulture, and Basil P. Krone, Fruit Packing Instructor. There is a nice introduction by the Minister for Agriculture (Hon. W. Slater, M.L.A.). Copies are obtainable on application to the Department of Agriculture, 605 Flinders-street, Melbourne.

Wife: "Last night I dreamt you bought me a hat."

Hubby: "That's the first dream of a hat you ever had that didn't cost me anything."

Editorial.

The Sugar Burden.

FOR SEVERAL YEARS the "Fruit World" has vigorously protested against the unfair incidence of the sugar agreement. Fruitgrowers need no convincing as to the fairness of our statement of the situation. The sugar industry has imposed a crushing burden on the fruit industry. That fact is self-evident.

Now, however, that Australia is facing a very severe national financial crisis, the attention of the public press is focussed on this subject, and the battle which the "Fruit World" commenced fifteen years ago is now being waged in earnest by the leading newspapers throughout Australia—Queensland excepted.

The sugar agreement and embargo cost Australia over £7,000,000 per annum. The price is too great.

Australia produces around 500,000 tons of sugar per annum, and consumes 300,000 tons, leaving 200,000 tons to be exported at a loss. The price to average consumers is £37 a ton. The export price is around £11 per ton. Certainly the fruit processing industry receives sugar at £30 per ton for home consumption. Still the consumption of jam declines. All too well the fruitgrowers know that housewives are not making nearly the same quantity of jam as they did a few years ago. The price of sugar is too high.

Plum orchards are going out of cultivation. Growers from all the Australian States visited Hobart last May to attend the Australian Conference, and there they noted with much regret the evil times on which the Tasmanian berry-growing industry had fallen, due almost entirely to the utterly unfair sugar position.

The idea of the sugar industry being the bulwark of the "White Australia" policy has long been exploded. We are indeed rapidly becoming a "white" Australia—bled white by uneconomic embargoes, tariffs and the like, of which the sugar agreement is the outstanding example.

No wonder Western Australia and Tasmania are talking of secession. If the sugar agreement is renewed it should be on very different terms to the one which is shortly expiring.

Furthermore, provision should be made that the burden be more equally distributed over the whole community, and not fall so crushingly upon the fruit industry.

Later.—As we go to press the Prime Minister has announced that a committee representing the sugar interests, the general public, and the fruitgrowers, is being constituted to investigate the sugar position before the renewal of the sugar agreement can be considered.

Although evidence is not to be tendered on oath, this investigating committee should be in a position to secure information of great value to the Australian public.

OUR NATIONAL FINANCE.

THE FINANCIAL MISSION, under the leadership of Sir Otto Niemeyer (Bank of England), is closely examining Australia's finance. We have strayed from the paths of economic sanity; there are several ills in our body politic, including the fungus growth of Governmental activities in the realm of business, and we must take our medicine.

Australia is now awakening to the fact that our primary industries are of first importance. When some of the harassing restrictions are removed from the fruit industry, this, with other of our important primary industries, will assist in winning back prosperity to Australia.

NUT GROWING.

Importance of Queensland Nut (Macadamia).

IN view of the large quantities of nuts imported from overseas, it seems a pity that more attention is not being paid to the production of the Australian native nut—Macadamia ternifolia.

This has an exceedingly rich and pleasant flavor, somewhat similar, yet superior to, the Brazil nut. So far, one disadvantage has been in its hard shell.

Experiments are being conducted, however, to produce varieties with thin shells and larger nuts. Experiments in this connection are being conducted at the Narara Nursery and the Wollongbar Experiment Farm, under the direction of the Director of Fruit Culture (Mr. C. G. Savage).

Mr. Savage advises having received a letter from Mr. J. A. Neilson, a noted American nut expert, in charge of the Michigan State Agricultural College, to the effect that "America is taking off its hat to Australia for producing the world's finest nut—the Macadamia."

* * * * *

It is worth noting that the Macadamia needs about four months to mature. If supplied before maturity the nut is tasteless.

If growers in Queensland or New South Wales, where it is now being produced, market their immature nuts, the public will be disappointed and a valuable trade lost.

APPLE ADVERTISING A NECESSITY.

American Opinions.

"The Apple-growers have a bright future if they will advertise and create a strong demand for their Apples. All other successful industries have found it necessary to advertise their products in order to maintain a prosperous condition." So states ex-Governor Harry S. Byrd, of Virginia. (By the way, H. S. Byrd is a brother of the famous Dick Byrd, the airman.)

"Advertising rules the world," states J. N. Dyer in "American Fruitgrower." "For years the Apple has been called the 'King of Fruits.'" This exalted position has been wrested from the Apple, and to-day the Banana has usurped the throne through the power of advertising.

The distribution of Apples has become subordinate to Bananas and citrus because the organised producers of these products have not hesitated to tell the world their health-giving properties.

Our Correspondence Column.

COLOR IN APPLES.

"Jonathan," Dandenong, writes: "I have some Jonathan trees which bear well, but the fruit is deficient in color. The soil is heavy, with clay sub-soil. Could you tell me what manure I could use to aid their coloring?"

Answer (by F. W. Vear).—Re your correspondent's enquiry as to lack of color in his Jonathans. I think, generally, that has been a feature of them this season. The best I have noticed were on deep sand or granite country. Potash usually improves the color.

(Editor, "Fruit World.")

Dear Sir,—

In your issue of July 1, there is a query from "Pale Fruit," Ringwood, asking how to improve the color of Apples. I have read the answers given, but I do not think that they touch the root of the matter. My experience has been that the openness of the soil is one of the main factors in the coloring of Apples. I suggest the following treatment. After the autumn rains, do not touch the ground until about September, then turn it over quickly, when it is in the right condition, not too wet. Allow it to remain uncultivated until the sods dry out, this will depend upon the season, but it will be seldom earlier than November, then break down thoroughly and keep well cultivated through the summer. It would also be an advantage to give a good dressing of lime.

E. H. HATFIELD.

Tynong, 12/7/30.

SOUTH AUSTRALIAN FRUIT SITUATION.

Heavy Crops and Limited Markets.

Adverse Effect of High Sugar Prices.

Fruit Pool Suggested.

To the Editor, "Fruit World."

Sir,—According to a report published in the "Fruit World," the Pear canning industry in the United States has been seriously injured by the prevalence of fireblight, and Pears suitable for canning have realised good prices.

South Australian canners, however, state that canned Pears cannot be exported profitably, and being overstocked with last season's pack, they could only operate to a very limited extent, the price not exceeding £4 on trucks. Consequently a large proportion of the crop was not harvested. In the Barossa district, famous for the quality of its canned fruit, over 20,000 bushels were left to rot, or were fed to pigs, and in the irrigated settlements the waste of good Pears was enormous.

The Plum crop was fair, but a large quantity could not be sold, owing to the high price of sugar, and its effect on the jam industry.

The Apple crop throughout the State was the heaviest on record; about 650,000 cases were exported, and this amount would have been considerably exceeded, if the climatic conditions had been more favorable. The local market has been glutted, and prices even for the best varieties do not return the cost of production.

In 1917, when the export trade was completely closed, on account of the submarine menace, S.A. growers were faced with the problem of disposing of a heavy crop in the local market, at a serious loss. A pool was then formed amongst the growers, under the supervision of the manager of the Government Produce Depot. By means of extensive advertising and efficient management the whole of the crop was sold at satisfactory prices.

A. B. Robin.

Nuriootpa, S. Aust.

PERSONAL.

Mr. H. Broadfoot (N.S.W. Department of Agriculture), who accompanied the "Port Hunter" shipment of N.S.W. fruit to Hull, is spending some time in England. He will visit the various markets, and also visit the East Malling, Long Ashton, Cambridge and other research stations.

Prof. J. A. Prescott, of the Waite Agricultural Research Institute, visited Renmark during July and discussed soil surveys and viticultural problems.

Senor Gonzalez, who was recently in Australia studying aspects of the fruit industry, is visiting New Zealand observing the fruit industry there.

Mr. J. L. Provan, of the Victorian Department of Agriculture, is devoting his time to citrus stocks and bud selection. Mr. Provan is a capable officer and much good should result from his researches.

MR. A. V. LYON APPRECIATED.

Growers in the Murray Valley appreciate the activities of Mr. A. V. Lyon, M. Ag.Sc., officer in charge of the Merbein Research Station, which is under the auspices of the Council for Scientific and Industrial Research.

Efforts are being made to have Mr. Lyon made free to give more lectures and field demonstrations so as to make the results of his researches more widely known.

AN APPLE PACKING BULLETIN has been prepared by the Victorian Department of Agriculture, giving comprehensive information about methods of packing and grading for export. Copies are available from the Superintendent of Horticulture, 605 Flinders-street, Melbourne.

GERMAN DUTY ON APPLES.

Mr. G. E. Richards, of Sutton Grange, Vic., has written supporting the resolution carried at the Australian Conference of Fruitgrowers for a revision of Australia's trade arrangements with Germany. Australian Apples, writes Mr. Richards, pay a duty of 3/- a case; other countries 1/6 a case. The loss to Australia owing to the extra duty is thus £75 per 1,000 cases. As the cost of production is about 4/- a case and the cost of landing in Germany 11/- a case, it is questionable whether the German people can continue paying prices which will show the grower a profit. Messrs. Astheimer & Sohn, Hamburg, reported favorably on the quality and flavor of Chilean Apples, which enjoyed the low tariff, and would have a better chance to be introduced to fill the places of Australian and Tasmanian Apples.

Know then the truth (enough for men to know): "Virtue alone is happiness below."—Pope.

Pruning Deciduous Fruit Trees.

The Apple and Pear.

(Continued from July issue.)

(By P. H. Thomas, Tasmania Chief Horticulturist.)

Reproduced by courtesy of the Tasmanian Department of Agriculture, being a reprint of their Bulletin No. 5 (new series.)

The Apple.

BEFORE COMMENCING TO PRUNE a tree it is necessary that the operator possess a knowledge of its fruiting habit. This is especially necessary with the Apple.

There are many varieties grown, and a great number possess peculiarities in this respect that should be taken into account when treating them.

Some varieties, such as Jonathan, King David, Pomme de Neige, and Cox's Orange Pippin, are essentially "lateral bearers," whilst others, such as Sturmer, Dunns, and Croftons, are more inclined to carry the majority of their fruits on short spurs.

The grower is faced with the problem of effectually treating the different classes of laterals. This will depend on the variety. Always remember that each cut should be made with a definite objective. Unless this is attained it is foolish to persist in the treatment. With lateral-bearing varieties a fair proportion of the light to medium grown laterals may be left untouched. Heavier ones may be shortened back to induce fruit spur formation, whilst it is advisable to remove all strong, vigorous, upright growths that do not lend themselves to treatment.

By shortening, stopping, or removing unnecessary growths, together with the short natural spur formations which most varieties carry, a system of fruiting spurs and branches may be built into the tree.

In the case of "spur-bearing" varieties, fewer laterals will be used, and the fruit will be borne on the short spurs that readily form throughout the tree.

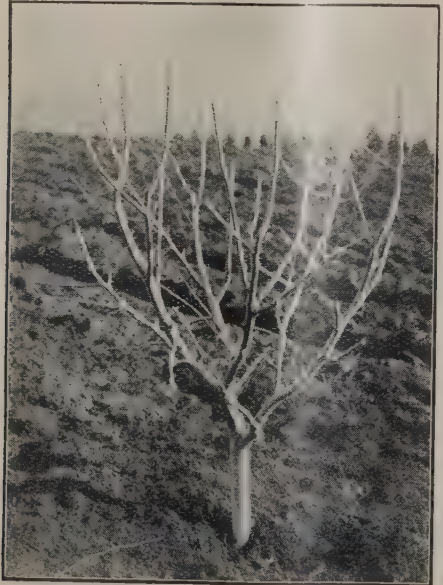
The Jonathan

is a variety that has certain peculiarities which must be considered when pruning is carried out. Being a lateral bearer, it is essential that all light wood (up to 18 inches in length) be only just tipped.

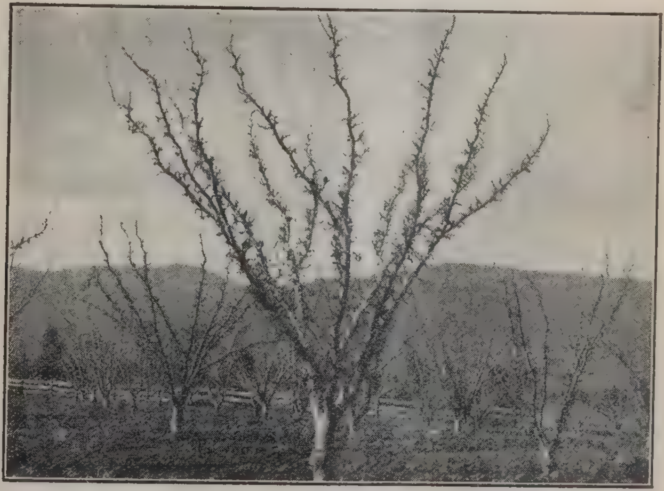
This will ensure a setting of healthy fruit buds for the following year, when the laterals may be "stopped" back to the length required, ultimately developing into a sturdy fruiting branch. The heavier and longer laterals may be shortened back to one-third of their length; this will develop the buds on the portion retained in a similar way. The Jonathan possesses the peculiarity of carrying two or three blind buds at the base of most of its laterals. Hard cutting of these will tend to promote strong growth, or else cause them to die back. If they die, it very often happens that a growth does not develop to replace them, and the tree is left with a number of barren spaces along the main limbs.

The spur-bearing varieties

do not require such liberal treatment. Most of these readily set their fruits on the sturdy fruit spurs which form on the main limbs. Lateral growths may be shortened back more severely and good results obtained. At the same time, these varieties should not be treated too drastically. By cutting to the third, fourth, or fifth bud, according to the vigor and length of the lateral, one or two fruit buds may be encouraged to form the first year, whereas by shortening right back to the first bud, as is sometimes practised, growth shoots are forced, and two or



Shaping the Tree: Development of "leaders" and fruiting "laterals." Note even spacing. (Apple, Jonathan.)



Apple: Tree pruned on the "short spur" method. (Apple, Sturmer Pippin.)

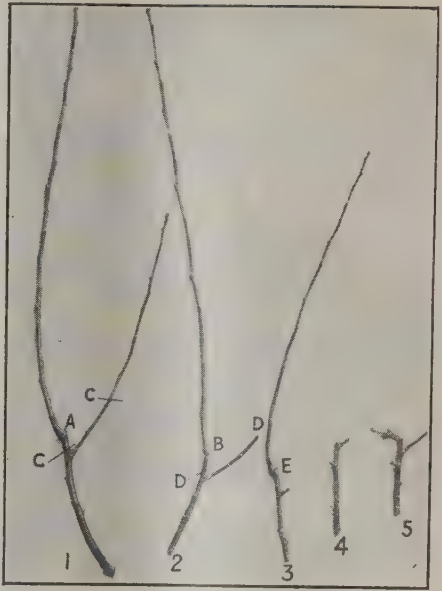
three years of the treatment is necessary before a healthy spur development is obtained.

After a tree has come into bearing the fruit spurs multiply very quickly, and, if the low-headed type has been adopted, will soon become crowded. In most spur-bearing varieties this is very pronounced, the buds "doubling-up" every year, resulting in a multitude of weak or semi-developed buds. This induces biennial cropping, the tree exhausting itself in the effort of developing and setting the heavy crops produced.

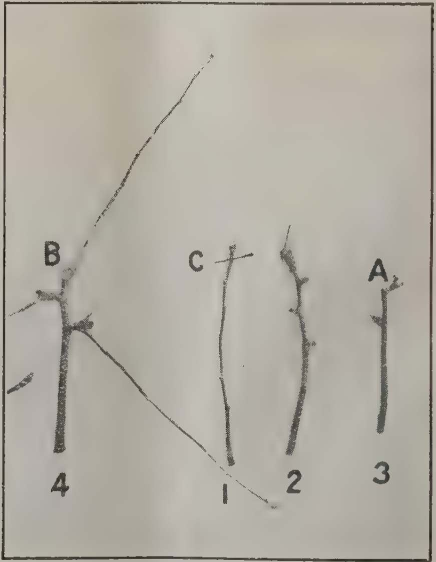
In nearly all varieties it is necessary to considerably reduce the fruit spurs throughout the tree. These are thinned out at the winter pruning, retaining only the healthiest and best developed buds.

Apple Tree pruned on the "lateral" method. (Jonathan.)

Apple Tree pruned on the "modified lateral" system. (Tasman's Pride.)



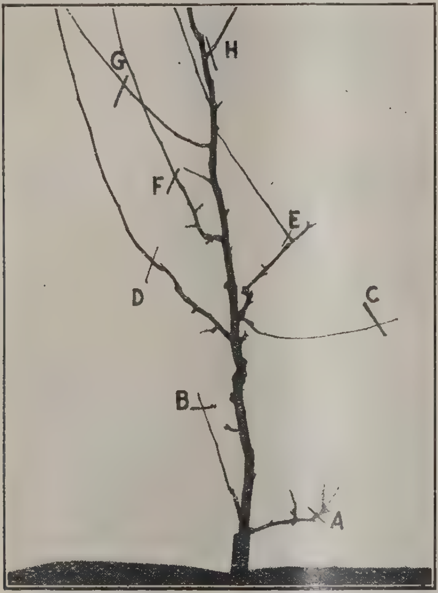
Treatment of Laterals Nos. 1 and 2: Strong growing laterals "shortened" at A and B. Note fruit buds forming on old wood. Suggested treatment:—Remove growths at C and D, No. 3. Weaker lateral "shortened" at E. Fruit buds have formed, and it is "stopped" as in No. 4, developing further fruit buds the following year as in No. 5.



Treatment of Laterals: No. 1. Weak Jonathan lateral "tipped" at C. No. 2. Second year, showing development of fruit buds. No. 3. Lateral "stopped" back at A to stimulate bud development. No. 4. Strong growing lateral which has been forced into growth owing to too drastic treatment.

When carrying out this operation, attention should be directed to the spacing of the spurs along the limbs and sub-branches, the object being to retain only sufficient to allow the full growth of the fruits without unnecessary crowding.

Apples such as Worcester Pearmain, Rome Beauty, and Tasma (Democrat) are sometimes—especially when making vigorous growth—shy in furnishing fruit buds.



Apple: Suggested treatment:—Fruiting laterals shortened back at A and D to promote new growth. Weak laterals tipped at B and C to develop fruit buds. Weak laterals of preceding year, showing bud development; these are stopped at E and F. Strong laterals retained and shortened back at G. Secondary growth removed at H. (Jonathan.)

Spur-thinning: An extreme case of neglect. Over 200 fruit buds were counted on the section of the limb shown.

The light laterals, if left untouched, instead of developing spurs along most of their length—as is the case with the Jonathan and other lateral bearers—develop fruit buds at their terminals, and then generally fork, throwing out another two growths, leaving the first lateral barren of fruit buds.

This characteristic sometimes makes the varieties difficult to manage. It is suggested that such varieties be treated by "stopping" the young laterals back in February, cutting off about a quarter of their growth. This check will generally induce a number of fruit buds to form. Further "stopping" in the following winter will promote their development into sturdy fruit spurs.

Spur-thinning: The same limb as shown in previous photo. after "fruit spurs" have been thinned.

Apple: Tasma (Democrat) variety brought into early bearing by adoption of "lateral" method of pruning.

Pear.

THE PEAR is perhaps the most long-lived and vigorous of our deciduous fruits. During the younger stages of the tree's life careful attention should be paid to training the main "leaders," in order to secure an open and well-branched tree.

Owing to the vigorous growth generally made by young trees, especially when situated under favorable conditions, there is sometimes a tendency to leave them to their own devices. The majority of Pears, except such varieties as Josephine de Malines, Gansell's Bergamotte, Packham's Triumph, and a few others, are inclined to an upright habit of growth.

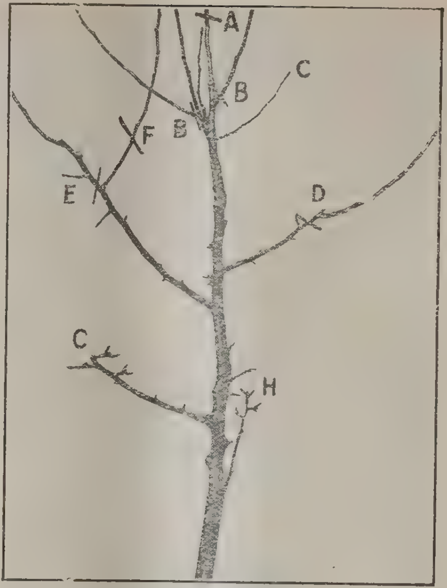
This habit must not be lost sight of in the training of the young tree, and unless artificial methods and judicious pruning are adopted in the early stages of growth, the resultant tree will be dense, close-headed, and carry only a small number of main limbs. When pruning such varieties, every advantage should be taken to spread the basal framework. This may be carried out by using wooden braces, by leaving 2 or 3 inches of wood (the buds being removed) above the terminal bud selected, and by shortening back the "leaders" to well-placed laterals, which often form the lower portion of their growth.

Special stress is laid on proper attention being devoted to this matter, as in after years the tree is not liable to make a rank vigorous growth, fruiting is encouraged, and the open tree is not so subject to fungus infection.

The majority of Pear varieties are

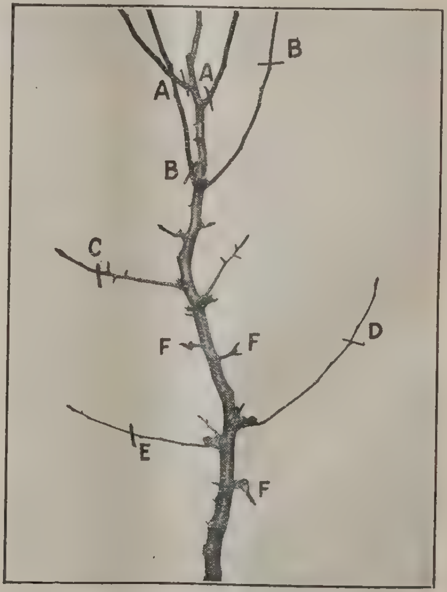
essentially lateral bearers.

If regular crops are desired, and trees are to be brought into fruiting at an early stage, it is advisable to encourage and make full use of the laterals.



Pear: Lateral pruning. Leader shortened at A. Secondary growths removed at B. C. Light fruiting lateral left unpruned. Strong lateral, treated the previous year, has produced fruit buds, and is removed at D. E.F. Treatment suggested for very vigorous growths. G. Lateral similar to D stopped the previous year. H. Light lateral similar to C, showing fruit buds forming after being left unpruned. (Josephine de Malines.)

Pear: Pruned to modified "spur" system of fruiting. (Williams.)



Pear: Spur-bearing variety. Secondary growths removed at A. Strong growths, replacing lateral removed previous year, pruned at B. Lateral forming fruit buds "stopped" at C. Light laterals shortened at D and E. Fruit spurs forming naturally on main limbs. (Williams.)

The heavy upright growths not required for purposes of framework should be removed by cutting them cleanly away from the main limbs.

The best fruiting wood is obtained from the short spurs and light laterals. These should be left uncut, and only thinned out when occupying an unsuitable position or becoming too crowded.

The heavier and more vigorous laterals may be shortened back to about two-thirds of their length, in order to furnish a sturdy spur formation. These, if not treated in the way described, generally form their fruit buds at the end of the lateral, which ultimately develops into a long, straggling branch, and the fruits borne often suffer severely from wind injury, especially in exposed situations.

Varieties such as Winter Nelis, Doyenne du Comice, Williams, and Beurre de Capiaumont, when of mature age, are apt to form an abundance of fruit spurs and comparatively few new laterals. Such a condition is generally accompanied by a poor fruit setting, the majority of blossoms not developing. Where this is experienced it is advisable to give a heavy spur pruning, in some cases almost two-thirds of the fruit buds being removed. Such treatment will considerably improve the cropping, and also be a factor towards increasing the size and quality of the fruits.

Better Packing and Preparation for Export.

Handling in the Orchard—Evolution of the Pack—Types of Cases—Handling and Loading on Ships—Elimination of "Plain" Grade Recommended.

A paper read before the Australian Conference of Fruitgrowers, Hobart by W. L. Gregory (Gerrard Wire Tying Machines Pty. Ltd.)

IN PLACING this paper on "Better Packing and Preparation for Export" before you, I would like to say that the matter contained therein has been derived from various authorities overseas and otherwise, and from past personal experience. My intention is to deal with, not only the better packing presentation, etc., but also with the handling in the orchard, on the rail, at the ship's side and finally the handling and stowage in the chambers of the ship. My endeavor is to point out as many defects as possible that are existing in our present method of marketing by means of export overseas. These faults are taking place from the time the fruit is being picked until the time the ship leaves the port of loading, therefore, it is more or less within our power to alter these existing conditions.

I will deal with each phase in its order.

HANDLING IN THE ORCHARD.—I would ask growers to pay more attention to what is one of the major factors in the carrying of our fruit, i.e., the careful picking. I have noticed in quite a number of instances that the requisite care is not taken when picking. Pickers, if not educated into what is required, have a tendency to drop and heavy-handle fruit, with the result that it is bruised before it passes over the grader to the packer. I have counted as many as ten bruises on fruits in some sheds this season. This fruit was packed and sent overseas. One does not have to be too far-seeing to realise what this fruit is going to look like when it arrives at its destination.

Quite a number of orchardists will argue that they are up against it for time, and that they have to sometimes take whoever they can get to do their picking. That may be, but the fact remains that this is one of the factors which are tending to place our export of fruit on a non-commercial basis in many instances. A new picker can very soon be educated into doing what is required.

We often see growers picking into the cases in which they are going to pack. This is perhaps cutting out the expense of picking boxes, but it is having a detrimental effect—covering the new boxes with dust or mud, and detracting from the appearance of the box when packed. It is advisable to keep boxes as clean as possible, as they get plenty of opportunity for getting dirty, and discolored in transit.

When picking, growers will find it better and more economical to sort their fruits into the various marketing grades, i.e., export fruit into one box, local market fruit into another, and rejects into a sack or some other type of container. By doing this they will save all double handling, have nothing but the best fruit sent to the packing house, keep the orchard free of all diseased fruit, and reduce the cost of handling in the orchard to a minimum. There is far too much "reject" fruit sent to packing houses. It means it has to be carted in and carted home again, thereby wasting valuable time which growers can ill afford.

By having to provide sorters in the packing house, to sort "reject" fruit, growers are only placing a needless tax on their consignments. The state of the industry at the present time will not allow such an overhead charge. You are also taking up valuable floor space in the packing house.

THE EVOLUTION OF THE PACK.—It may be of interest to many to hear how the present method of packing has come about. If you cast your thoughts back for twenty years and more you will no doubt recall the pack then in use. The pack was called **the Block Pack**. The Apples were placed in the case in rows, the stem down and calyx up. The next layers were placed directly on top of the layers underneath. This pack was most unsuitable for various reasons. The greatest difficulty was experienced in getting the various sizes to fit in the case, that is the first layer, and the number of layers in the case. Another bad fault was, when the fruit had shrunk, it made a loose pack, and invariably rattled in the case. The result was badly bruised fruit.

The next type of pack was what was termed **the Pyramid**. The fruit was placed similarly to the Block Pack in the first layer, the succeeding layers being placed in between the layers underneath, the rows having the same number of Apples, there being one row less in each alternate layer. This pack is still used in some of the citrus areas in the northern States when packing long flat bushel boxes. It has similar drawbacks to the Block Pack. In addition, when the case was opened, one saw long channel-like spaces, which showed clearly the case was not filled. This pack derived its name from its pyramid-like appearance.

The next type of pack was the **Diagonal Pack** on the flat. The Apples were placed diagonally in the case with the stem down and calyx up. This pack is still used by some growers. This was a better pack than the two preceding packs, but had its disadvantages and advantages over them. One advantage was that more fruit was got into the box, which meant, when shrinkage took place, the fruit would be less susceptible to bruising, owing to there being less unfilled space in the box. This is the major disadvantage. There are others, but time will not permit of my analysing them.

I may mention that the aforementioned three packs all had one common disadvantage: packers lost the level of the pack in each layer owing to the uneven depths of the fruits being packed. The keeping of a level surface in the layers is one of the major factors in good packing.

Whilst we were content to jog along in our easy matter-of-fact manner, our competitors were doing their utmost to improve their packing and general presentation. The United States of America spent quite a considerable sum of money in endeavoring to get the perfect pack. The resultant pack from this research is the one now in use to a great extent in the Commonwealth to-day. This pack is the Diagonal Cheek Pack, and after studying the packing literature of overseas countries and analysing the personal experience of expert packers, I have come to the conclusion that this pack cannot be faulted. Further proof of its efficiency is in the fact that the United States of America, Canada, South Africa, England, New Zealand and Argentine have all adopted it. This pack allows the absolute maximum of fruit to be placed in the box, thereby reducing the bruising through shrinkage, to a minimum.

A packer can always maintain the level of his pack if the fruit is sized correctly, as the size of the fruit is measured from cheek to cheek, and is packed on its cheek. This overcomes the difficulty experienced in the past through the irregularity in the depths of the fruits. This pack being standardised allows us to work to standard counts. This is an advantage to the buyer, seeing that most of the countries on the other side of the world sell to the public by number and not by weight. At this juncture I would mention that **it is an advantage when packing for export to mark the count on the case, and not the size.** We must be prepared to give the people we sell our goods to, what they are asking for, and if we do not then we must suffer the consequences. We have had quite a budget of cables, etc., asking why we do not mark the counts.

In this pack all fruits sit snugly into the pockets formed by the fruits in the layer underneath, thereby forming a snug bed for each Apple in the next layer.

TYPES OF CASES.—A present we are exporting our Apples in three types of cases, and our Pears in approximately eight. This is absurd for quite a number of reasons. Firstly, we are getting away from what should be embodied with a standard pack, i.e., a standard case. **It is absolutely essential that we have a certain type of case for a certain class of fruit, and that it be specially designed for the carriage of that fruit. When we have arrived at that stage we do not want to still keep on with all the various other types.**

At present the boxes which seem to be most adaptable for the export of Pears, are the **long flat bushel, ½ dumps,** and sets of trays. On going through the reports and returns for the past three years, I find that there is very little between these types of packages, both in carriage and returns. That being so, can we not get down to one type and make it the standard, thereby eliminating these other packages.

It is a very hard matter for the shipping companies to give good stowage if we are going to continue in this manner. The various shaped boxes breaks the stowage, with the result they make a stack which is not as firm as it might be in the hold. There is no doubt that the case that is most suitable for Apples is the softwood standard (18 in x 11½ in. x 10½ in.). Originating in America, the standard box is now in use in Canada, South Africa, New Zealand and Argentine as well. Within the last twelve months England has adopted it for the home marketing of her own Apple crops. The chief

advantages of the standard case

over the hardwood dump case are:—

Its greater elasticity.

Its greater width and less depth allow more cases to be packed in a given time. The standard takes less nails than the dump, therefore it is quicker and cheaper to make, case for case.

The standard, when packed, weighs approximately 52 lbs. gross, the hardwood dump, when packed, about 64 lbs. This difference in weight is a big factor in better handling.

The softwood box can be carried over from year to year without any loss, but if you attempt to carry over the hardwood shooks you will invariably find them useless the next season, owing to them shrinking and becoming undersize. Generally, hardwood shooks are supplied to the grower straight from the tree. Being green, the sap is running out of them, and when packed the paper is stained and the fruit has a poor appearance when opened up. There is also more or less a percentage of gum stains which also detracts from the external appearance of the packages. I have also noticed that in most instances the sheds and growers who do their own packing have to run the hardwood ends over a saw bench to cut them down to the required measurement, 8-2/3 in. in width.

Considering all the aforementioned facts, I ask you: is it a fair thing for the fruitgrower (who is hard put to make anything out of the industry at the present time), to have to bear all this overhead expense. We have quite a number of people who say we should be patriotic and use only Australian timbers, but if you walk into the homes of most of these people you will find imported flooring, weather and lining boards.

It is essential that our exports be got up in the best possible manner, and, if we are going to improve our industry and get better prices, it means we are going to bring more money into the country. At the present time it would be very acceptable as our trade balance is very much on the wrong side of the ledger. This is possible by spending a few extra pence, and getting the softwood case, thereby improving our presentation. I would point out that our Pinus insignis timber, if properly treated, makes a very fine softwood case.

In regard to the elasticity of the softwood standard, I would like to give an illustration of what it means in the carriage of fruit. Many growers put forth the argument that the hardwood case, being a rigid case, will stand more heavy handling than the softwood. As an illustration I would ask you to picture a box made of mild steel, and packed with our best Apples. With all the rough handling that takes place in transit, the box would come through allright, but, what would happen to the fruit? You would find that it had taken all the shock, and not the box, with the result that it would be badly bruised.

On May 2, 1928, Mr. White, the Victorian Trade Commissioner, in his report, said that the fruit in the standard case was arriving in London and on the Continent, in a far less bruised condition than that which was packed in the hardwood cases. He also said this case was much preferred to the dump case, on the United Kingdom and Continental markets. Similar reports to this were received on May 29, July 6 and August 2 of that year. A report by Sir Henry Barwell (Agent-General for South Australia), which was printed in "The News," Adelaide, October 19, 1928, states that our fruit would be better received if it were packed in the lighter standard cases, similar to the American and New Zealand.

The "Argus," Melbourne, printed on October 9, 1929, a memorandum received by the Minister for Agriculture (Mr. Pennington) from the Agent-General (Mr. W. Leitch), containing several suggestions towards the improvement of our Apple pack. One of these was, that fruit packed in standard softwood cases, with cleats top and bottom, was arriving in London in a far less bruised condition than in any other box. He also said that it made a better pack.

That the American fruitgrowers view with concern the sudden change over to the standard case in some States of the Commonwealth is shown in a report which appears in the "International Journal of America" for March, 1930. It states that the American fruitgrower will have to endeavor to improve the presentation and quality of their fruit still further, owing to Australia having taken on to the standard softwood case, and community packing and labelling, thereby improving their package.

The Rev. F. McQueen, a grower and exporter, after arriving back from his trip with the Scottish Delegation, stated in the Melbourne "Herald," October 29, 1928, that unless our Apples were better packed, and our packages improved in appearance, we were in great danger of losing the English market. He emphasised the fact that the New Zealand fruit, although no better fruit than our own, was made more attractive by the manner in which it was got up. We cannot afford to close our eyes to these remarks, knowing as we do that the fruit export industry is not in the flourishing position we would like to see it.

We must realise that we have to conform to the wishes of the people who are purchasing our fruit, therefore, let us endeavor to deliver the goods. Another feature of the better labels, well designed, is that they give an added attraction to a package. This being so I would advise all districts to come together in their various districts and pack under community brands. The small individual grower will find it a very hard proposition to market his small consignments alongside the well-established labelled pack.

By co-operating and centralising he will bring down his packing expenses to a minimum. Our competitors overseas are putting up a fine pack, and if we want to compete with them we must equal it or better it.

Loading Standard Cases.—There has been a tendency on the part of a number of growers, when stacking or loading standard cases, to lay them on the bulge. This is a great mistake, as the weight of fruit in the cases, pressing on the bulge, also the rocking which would take place, has a tendency to bruise. Another fault is to be found when growers are loading a railway truck. They will load tiers each end, and when the truck leaves the station from which it is consigned, the cases will all fall through vibration and shrinking into the centre, with the result that boxes are smashed and the fruit is spread over the floor of the truck. By keeping the layers level over all the surface of the truck when loading, this would keep all the cases in their place, and eliminate all loss through breakages.

LOADING IN SHIP'S HOLD.—As I have referred previously to the difficulty which is experienced in stowing in the ship's chamber with the various sized cases, I will not go into any more details of same, but for the benefit of those who have not seen the fruit being stowed I will illustrate the method employed by reading portion of a report which I made to the Department of Agriculture last year.

The fruit is stowed in what is practically a block stack. The dunnage is only a ⅜ in. lath, which, when all is said and done, is very poor ventilation in stacks of this size. In 1927-8 I took the temperature of fruit, when opened for inspection, as soon as it left the louvre trucks. I inserted the thermometer into the fruit and found on quite a number of occasions it went as high as 82 deg. In one instance fruit which was being loaded into a 40,000 cases capacity went 85 deg. It was common to get a temperature of 70 deg. or thereabouts. I ask: "How can the engineer possibly get this chamber down to an even temperature of 33 to 35 deg.?" According to the official reports he never gets it down. This is what is causing a great deal of the fruit to break down on the voyage between here and continental ports. Another point is whether it is within the bounds of possibility for an engineer to handle (i.e., carry at a temperature of 33 to 35 deg.), that quantity of fruit, loaded at a high temperature into one chamber, with the plant at his disposal. I very much doubt it. The fact remains that it has not been done up to the present during my experience.

Summary.

In conclusion, I would like to note a few points for consideration, which I think would tend to uplift our export trade, viz.:—

That an endeavor be made to bring about some means by which all our export fruit could be pre-cooled.

That the plain grade should be absolutely abolished, so that nothing but the best be sent away. At present the good fruit has to put up with the competition of the poor quality plain grade, and the prices are affected accordingly; also our reputation as exporters.

That something be done to prohibit the export of fruit in the hardwood box for reasons aforementioned.

That a limit be placed on the number of varieties exported.

That the standard case (18 in. x 11½ in. x 10½ in.), be the only case used for exporting Apples. This is the best case from a packing, appearance, and selling point of view, and it is the case United Kingdom and Continental buyers want.

That something be done to have the chambers on the ships of smaller capacity, about 9,000 to 10,000 cases.

That enquiries be made re the handling on the other side.

I think, if these points were considered and finalised, it would lift our export of fresh fruit on to a much higher plane than it is at present.

* * *

The writer of the foregoing paper is a practical fruitgrower. He spent some years in the Agricultural Department, Victoria, in both the inspection and packing branches. Subsequently he resigned to join the Gerrard Wire Tying Machines Co. Pty. Ltd.

The reading of the paper at the Conference was followed by an interesting discussion, at the conclusion a hearty vote of thanks was conveyed to Mr. Gregory.

South Australia.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

At the executive meeting of the S.A.F.M.A., on July 7, Mr. H. J. Bishop presided over a large attendance.

Export.

Export Overseas Transport Committee.—The Chairman and Mr. D. Blyth explained the objectives of this Committee, and it was decided to contribute towards the expenses. Mr. H. J. Bishop is the Association representative on the Committee.

Codlin Affected Fruit.—The Minister of Agriculture advised that the regulations had been cancelled in regard to codlin moth fruit being forwarded to the Murray Valley.

Utilising Waste Apples.—Mr. H. L. Penfold Hyland's suggestion for the profitable utilisation of waste Apples was referred to the annual meeting.

Membership.—Mr. G. W. Norsworthy, the Association's organiser, reported that a large number of new members had been enrolled, and much useful information about the S.A.F.M.A. had been disseminated. Appreciation was expressed for Mr. Norsworthy's services.

Levies.—The Secretary reported that levies had already been paid on approximately 50 per cent. of the total export for the season, and it was expected when the levies were finalised, it would be found that the Association represented between 70 and 80 per cent. of the total export. To assist in checking levies it was resolved that all growers should be asked to supply the Secretary with the total quantities of fruit exported by them for the season.

Annual Meeting.—It was decided that the annual meeting be held on July 25.

Incorporation.—Incorporation of the Association has now been finalised, and the certificate of incorporation was signed by the Registrar of Companies on June 4, 1930.

Export Fruit.—Gratifying reports are being received from overseas as to the marked improvements in the pack and general condition of South Australian fruit. This improvement is largely due to the efforts of the Association in securing Mr. Krone's services in January last for instructional purposes.

Pruning competitions were conducted at Reynella, South Australia, on June 20, under the auspices of the Royal Agricultural and Horticultural Society of South Australia. Mr. A. H. King secured the highest aggregate in the senior section, and Mr. G. Boehm in the junior section.

Torrens Valley.

The suitability of Poorman Oranges for fruit drinks was stressed at the annual meeting of the Torrens Valley branch of the South Australian Fruitgrowers and Market Gardeners' Association. It was decided to advertise to increase the consumption of Oranges and to take action to limit the sale of synthetic fruit drinks, which were really harmful to the public.

Office-bearers were elected:—President, Mr. F. Wicks; Vice-President, Mr. W. H. Pittmann; Delegate to Executive, Mr. T. B. Gameau; Hon. Secretary, Mr. W. J. Kimber.

INCREASED DUTY ON OLIVE OIL is sought by the South Australian Fruitgrowers and Market Gardeners' Association, as large quantities of olive oil are coming in from Southern Europe at a low price, preventing local manufacturers from giving South Australian growers a favorable price for the Olives. Indeed, no Olives are selling.

* * * * *

At the June meeting Mr. W. H. Ind presided. It was decided to thank the Victorian and S. Aust. Commissioners for agreeing to carry crates of Celery at fruit rate freight—a reduction of 6d. per crate.

Melbourne Celery prices were low, but the growers' position would be worse but for the presence of their representative in Melbourne.

SOUTH AUSTRALIA.

Verdun.

Mr. H. N. Wicks, of Verdun (Balhannah), South Australia, advises that there are about 300 acres under fruit in this district; Apples are grown, mostly Jonathan, Dunns, R.B., S.P., and Rokewood; Pears are also grown.

Last season there was a heavy crop of fair quality. Indications are that the coming crop should be light.

Spraying is done in the spring for black spot and codlin. Little manuring is done.

At his 80 acre orchard, Mr. Wicks has the varieties as above listed.

The opinion is expressed that better packing would result if piecework were discontinued. The South Australian Fruit Marketing Association should prove a help to the industry.

Regarding Cases.—The "Canadian" standard box has been adopted, and it has been found to be a great improvement.

A Lightning grader, with specially designed features has been installed at Mr. Wicks' orchard. Lessons in packing were recently given to boys of the Verdun school.

Upper Sturt.

Mr. A. O. Petersen, of Upper Sturt, South Australia, sent the following interesting comments.

Spraying.—This is at an elevation of 1,500 feet from sea level, with an average of 48 in. rainfall.

We use a winter or early spring spray, red oil, 4 galls. to 100 water, mostly for spider and aphis in Peach trees.

We always spray early spring with Bordeaux, 12 bluestone, 8 lime, to 100 water, then follow with lime sulphur.

Growers on lower levels, say up 1,000 ft., only use lime sulphur with safety for black spot.

For codlin, I think the time is not far distant when we will be using mostly white oil instead of arsenate of lead. Our first year's experiment had wonderful results, not only had the desired effect, but gave the fruit a good color. Growers, however, will need to be careful what oil they use, until reliable brands get on the market.

What we are asking ourselves, is, how to produce regular and moderate crops? If this problem can be solved, it will be worth while for the Australian Apple grower.

Citrus News and Notes.

EXPORT OF ORANGES.

Success of N.S.W. Shipments.

Research Work Appreciated.

TWO SHIPMENTS of Washington Navel Oranges, each of 5,000 Californian cases, equivalent to 7,500 bushels, have been made this season to Canada. The first, which left on June 26, arrived in Vancouver in mid-July. The second went on July 24. The reports to hand, by cable, indicate that the fruit, on arrival, was in perfect order, and the quality and get-up were in every way equal to the current Californian brands placed on the Canadian market. There was only one detail omitted, which was the branding of each Orange with the trade mark.

The fruit was grown on the Murrumbidgee Irrigation Area—at Griffith, and was packed by the growers' own Co-operative Packing House—The Griffith Producers' Co-op. Co. Ltd. Special care was taken to ensure that not only was high quality fruit from the best orchards secured, but the growers took the necessary precautions in picking and carting to obviate any possibility of damage to the skin which would impair the keeping quality. The loading of all this fruit was closely supervised by the Central Citrus Association, and the hold into which the fruit was placed was approximately filled with the consignment. A dunnage of 3 in. was placed on the floor, and each two cases had 1 in. battens between. The cold storage system was air blast, and ample provision had been made for the observation of temperatures at various points. Following upon the results of experiments by the Council for Scientific and Industrial Research, the temperature at which the fruit was to be carried was fixed: 44 degrees maximum, with a minimum of 40 degrees. There appeared from information received that the temperature would be nearer top value than lower.

The fruit was not treated with any preservative, nor was it brushed, it was packed as it came from the growers, with a few days' interval to prevent it from sweating.

WANGARATTA (VIC.).

The citrus crop in this district is considerably larger than last season. A good crop of Navels of good quality is to be seen in all groves of the district, and a very heavy crop of Late Valencias of excellent market size, being the class of fruit that will produce the popular counts.

There is a good normal crop of Lemons of good sizes. Grapefruit also shows a good crop of nice quality fruit that will produce popular counts.

Mandarins (of Emperor variety), are well cropped. The marketing of the Oranges, beginning with Navels, will not commence till September, this district being later than the northern and Murray River districts. The Late Valencias are picked here from Christmas till April following.

The citrus crop in this district is beautifully clean owing to the intensive pest control methods of the growers; each vieing with the other to see who will produce the cleanest fruit.

J. P. LARKINGS.

Wangaratta, Vic., 5/7/30.

CITRUS FRUITS IN ENGLAND.

Imports from South Africa, also North and South America.

2¼ Million Boxes Expected this Season as Compared With 3,000,000 Boxes in 1928.

DURING 1929, South Africa shipped 1,100,000 boxes of citrus to the United Kingdom. During March to October of the same year, the United States sent 1,460,000 boxes (as compared with 130,000 boxes in 1928), while arrivals from Brazil and Argentina showed a marked advance to 460,000 boxes, as compared with 150,000 boxes in 1928.

Total arrivals of Oranges from South Africa and North and South America during the summer and autumn of 1929 thus reached a figure of 3,020,000 boxes, as compared with 1,095,000 boxes in 1928, and prices which had been forced up to exceptionally high levels in 1928, swung far in the opposite direction in 1929.

The 1930 season is now running, supplies having been received from South Africa, Brazil and California.

Indications are that supplies will be very far short of last season's record, although appreciably larger than 1928.

South African shipments of citrus are expected to increase to 1,500,000 boxes.

The Californian Orange crop which amounted to nearly 39,000,000 boxes in the year 1928-29, is this year estimated at only 23,600,000 boxes, or little more than their light crop of 1927-28, when shipments to the United Kingdom totalled only 130,000 boxes.

As regards Brazil, the position is doubtful. A maximum of 600,000 boxes may be shipped, or it is possible the total exported may be less than the 1929 figure of 460,000 boxes.

Imports of Oranges from South Africa, and North and South America in the six or seven months from May, 1930, may be estimated at from 2,000,000 to 2,250,000 boxes, or half way between the 3,000,000 boxes in 1929, and the 1,100,000 boxes in 1928. A total of 2¼ million boxes does not appear to be an excessive quantity for the United Kingdom to absorb in a period of six months. Arrivals from Spain and Palestine exceeded this quantity (states the weekly intelligence notes of the Empire Marketing Board) in a period of four weeks up to mid-December.

APPLE ROOT BORER NOW ATTACKING CITRUS.

That the Apple root borer, a pest which has latterly turned its attention to citrus orchards in the Windsor district, may be controlled by placing round each tree trunk a 3 inch band of a sticky tangle-foot mixture. The aim is to prevent the adult beetles from gaining access to the foliage, on which they lay their eggs, and as the adults were noticed last year to emerge from the soil toward the end of the present month (July) the action indicated should be taken without delay.—N.S.W. Department of Agriculture.

LEMON SCAB.

Readily Controlled with Bordeaux Mixture.

THE recent comment of the N.S.W. Director of Fruit Culture of the Department of Agriculture regarding the percentage of ill-favored, low quality Lemons which are offered to consumers gives particular point to a recent article in the N.S.W. "Agricultural Gazette" on the control of Lemon scab. This disease, which greatly spoils the appearance of the fruit for market and is often responsible for severe shedding of young fruit, is readily controlled by spraying with Bordeaux-oil (6-4-100) in the blossoming stage after half, but before all, of the petals have fallen from the flowers.

The above-mentioned fact, states the article, has been repeatedly demonstrated in departmental spraying experiments in the past five years. Bordeaux mixture of 6-4-100 strength gives equally as good results as stronger mixtures of Bordeaux. The addition of oil (one gallon to every 100 gallons of spray) gives the spray a much better spreading power, and it is more convenient to use than other spreaders. All of the brands of miscible red spraying oil on the market mix well with Bordeaux mixture, as also do the newly introduced white oils. The Bordeaux mixture should be prepared in the usual way, and then the oil, which has previously been emulsified with an equal quantity of water, carefully stirred into it.

It is recommended that the spray be applied twice in the season in orchards heavily attacked by scab; first, at the spring blossoming in September or October, and second, at the other heavy blossoming, which usually takes place in January or February. In orchards where the attack of scab is only light each season it may not be profitable to spray twice. The same is found to apply after a badly diseased orchard has been sprayed for two or three seasons—the presence of the causal fungus is so reduced that a single spray at one of the heavy blossomings will give quite satisfactory commercial control throughout the season. Where the grower concentrates more on the autumn than on the spring blossoming, or where the latter is likely to be the heavier or most profitable crop, then it should receive the spray if only one application is to be given.

Period of Spraying Important.

The spray should always be applied at the blossoming stage after half the flowers have shed their petals, but before all the petals have fallen. The difficulty in assessing this exact blossom stage is recognised, but experience has shown that it is essential that the spray be applied then if best results are to be obtained. Sprays which have been applied in experimental work even a week or ten days after the stage recommended have not given any control of the disease, whereas adjacent trees sprayed at the stage when three-quarters of the petals had fallen gave almost absolute control (average infection on unsprayed trees 80.4 per cent., and on sprayed trees only 4.7 per cent.).

The aim in applying the spray is to cover the very young fruits with the protective Bordeaux mixture, so that, when the spores of the fungus causing the disease are carried to the surface of the fruits and germinate there, they will be destroyed before they can gain entrance to, and cause infection of, the fruits. The tendency among some growers is to consider a tree well sprayed if the foliage is well covered, but it is an easier matter to obtain a good coating of spray on the leaves than to get a good cover on the young fruits, and until this is done good results in control of scab cannot be expected. A good pressure (say, 120 lb. and upwards) makes it much easier to obtain a satisfactory covering on young fruits, particularly when the spray is applied in the blossoming stages. There is no necessity to spray the interior of the trees when spraying for scab control.

Gives Almost Complete Control.

It has been recommended that all mature diseased fruit should be harvested before the main blossomings commence, and that care should be taken in picking up and burning all fallen fruit and in pruning out and burning diseased twigs; but whilst sanitary measures are to be recommended as a general practice, and a certain amount of routine pruning is essential with Lemons, the experience from experimental work has not indicated that any better control of scab is obtained than when spraying is carried out alone. It will be found, provided the spray is thoroughly applied at the correct blossoming stage, that almost absolute control of the disease will be obtained at once, even in bad seasons and in orchards heavily infected with scab.

MILDURA SHOW.

At the Mildura Horticultural and Agricultural Society's Show on July 23, there was an excellent display of citrus and dried fruit.

Awards were:—

District Exhibit of Citrus Fruit.—Mildura, 1; Merbein, 2; Red Cliffs, 3. Display of Citrus.—W. H. Hiscox, 1; Irymple Packing Co., 2. Best Packed Case of Oranges.—Merbein Co-operative, 1; Irymple Packing Co., 2. Best Three Cases.—Old Mildura Estate, 1; Irymple Packing Co., 2. Collection of Citrus.—Irymple Packing Co., 1; W. H. Hiscox, 2. Dried Fruit.—Sultanas—B. J. Robertson, 1; C. Gair, 2. Currants—J. H. Henshilwood, 1; V. L. B. Roberts, 2. Lexias—David Bros., 1; J. Gee, 2. Apricots—Irymple Packing Co. Peaches—Irymple Packing Co. Pears—F. Sagegrove. Prunes—Irymple Packing Co. Nectarines—Irmyple Packing Co. Figs—E. Morey. Clusters—Irymple Packing Co. Cups presented by the Victorian Dried Fruit Board were won as follows:—Currants—J. Henshilwood. Lexias—David Bros. Sultanas—B. J. Robertson.

VICTORIAN CITRUS PRODUCTION.

Oranges, Lemons and Limes in 1929-30 Season.

AN OFFICIAL RETURN for the season from March 1, 1929, to February 28, 1930, showing the quantities of citrus fruits in the various Victorian districts, has been prepared by the Government Statist, and shows as follows:—

Oranges.	Bushels.
Navel	239,736
Valencia	77,418
Mediterranean Sweets	9,244
Other Common	27,647
Mandarin	15,824
Seville	10,078
Grape Fruits	4,028
Total crop of Oranges, 1929-30	383,975
Total crop of Oranges, 1928-29	354,817
Lemons, Limes, Etc.	
Total crop of Lemons, 1929-30	115,212
Total crop of Lemons, 1928-29	137,684

CITRUS AND VINES AT CURLWAA.

Citrus Manuring Experiments.

EXPERIMENTS IN THE MANURING of citrus trees are being conducted at Curlwaa, N.S.W., by the Government Orchard Supervisor, Mr. W. McCutcheon, formerly of the Berri Experimental Orchard. Owing to the natural fertility of the soil, the blockers have been disposed to regard the use of fertilisers as superfluous, but the results obtained from these experiments, as far as they have gone, have demonstrated that this was a mistaken view.

The trees under test are being treated, in respective plots, with 20 per cent. sulphate of ammonia at the rate of 10 lbs. to the tree, 13 lbs. of "nitro chalk," containing a guaranteed nitrogen content of 15½ per cent., and 13 lbs. of nitrate of soda, with a nitrogen percentage of 15½. The application of nitrate of soda was judged to be too heavy, as the leaves of the trees so treated have scorched, but trees treated with the other nitrogen fertilisers last spring are now in much better heart than the unmanured trees, and are maturing from four to five cases to the tree, as against less than two on the latter. The best conditioned trees are those treated with sulphate of ammonia.

The tests are to run for five years, and at the end of that period the data accumulated will be forwarded to the Bud Selection Co-operative Society in Sydney, which consists of representative nurserymen throughout New South Wales and the principal Government horticultural experts, with the Director of Fruit Culture (Mr. C. G. Savage) as chairman. Attention will be paid by Mr. McCutcheon to every phase of the cultural work, as well as the manuring.

There are

490 acres of citrus trees

at Curlwaa, but not all yet in full bearing. Last year the output of citrus fruit was 25,000 cases, but this year an increase of nearly 10,000 cases is looked for. The local co-operative packing company has attained great success with its "Delta" brand pack, and last year received very high compliments on the quality of the fruit exported to New Zealand. The fruit was declared to be among the best that had reached the Dominion from any part of the world. The company has installed an electrically driven grading machine at a cost of £700, and the settlers have also co-operated for the purchase of tents and the fumigating plant for their citrus trees. An advance of £300 obtained for this purpose was repaid in three years from the profits of the scheme. A charge of from 1/- to 4/- the tree, according to size, is made for the use of the plant.

Vines and Dried Fruits.

There are 475 acres of vines in the settlement, with an output last year of approximately 1,000 tons of Sultanas, Currants, and Lexias. Dried Apricots and Peaches totalled 150 tons from 335 acres, but much of this fruit is sold fresh to Broken Hill buyers.—"Murray Pioneer."

VICTORIA.

Murrabit.—Mr. Wm. Jackson, of Gonn Crossing, via Kerang, writes:—

Present indications point to a very early spring, Almond trees being in full bloom up here, in fact, I have several Thompson Navel trees that will be in bloom in a week or two, the blossom buds are showing already. To date we have been extremely fortunate in that we have only had a few frosts only one getting as low as 24 degrees; considering that last year we had quite a number down to 18 degrees, it has been one of the mildest winters experienced.

Your idea of monthly fruit industry luncheons is a good one.

ADVERTISING TO INCREASE FRUIT CONSUMPTION.

N.S.W. Considering Case Levy.

Branches of the New South Wales Fruitgrowers' Federation are being consulted regarding the imposition of a levy for publicity purposes. Mr. H. G. Such, manager, Central Citrus Association, stated that Queensland growers had received great benefits from advertising because of the funds available by a small levy on each case sold.

ORANGE EXPORT TO NEW ZEALAND.

OWING TO THE HEAVY CROP of Oranges in Australia this season, the Federal Citrus Council has decided to export 50,000 cases. The general manager (Mr. J. A. Parkes), is investigating the possibilities of the New Zealand market. It is possible that accredited agents in the main dominion centres will be appointed; by an advertising campaign it is hoped to effect the sale of the 100,000 cases of Australian Oranges every year.

There is a duty of 3/- per case on Lemons entering New Zealand, but Oranges are admitted free.

The Federal Citrus Council proposes to have its own representative in New Zealand, and subsequently to ration the export from New South Wales, Victoria and South Australia.

WAIKERIE (S.A.) CITRUS GROWERS.

Export and Market Control.

THE WAIKERIE CITRUS ASSOCIATION has decided to ship two shipments each of 500 cases of Oranges to New Zealand, the first leaving on July 17. Their meeting at the end of June also decided in favor of the immediate adoption of a form of control, whereby members of the Murray Citrus Association shall market their total crop through the Association for a period of three years.

The General Secretary of the Murray Citrus Association (Mr. N. H. Underwood), spoke favorably of the services of the Producers' Distributing Society, and the success of their stand in Adelaide, which gave growers a wonderful opportunity to control the Adelaide market, which they never had been able to do before.

Frost Damage.—Mr. H. Bryant, of Winkie, River Murray, S.A., and other local growers, had their citrus crops damaged by frosts at the end of June.

THAT SUGAR EMBARGO AGAIN!

At the Marion branch of the South Australian Fruitgrowers and Market Gardeners' Association, it was decided to support the request for the abolition of the sugar embargo.

Western Australia.

WEST AUSTRALIAN CITRUS GROWERS' ASSOCIATION.

AT the annual meeting of the West Australian Citrus Association, Mr. A. C. R. Loaring presided over a large attendance.

Immature Citrus.—It was unanimously decided to approach the Minister for Agriculture requesting legislation to prohibit the sale of immature Oranges. Mr. Gus Schmidt stated that some growers were marketing Oranges unfit for human consumption. Another grower stated that many Oranges were green and the general public were put off purchasing further quantities.

Propaganda to Increase Consumption.—The assistance of the Railways Department was appreciated. A handsome poster advertising citrus was being displayed, also a poster containing the names and addresses of members willing to supply country customers with cases of Oranges.

Orange Exports.—It was decided to arrange for supplies to Java, Singapore, Sourabaya and other centres in the near East. Growers at Chittering, Gosnells and other places agreed to send supplies.

The Fruit Fly.—It was decided by resolution to direct the attention of the Department of Agriculture to the fact that the fruit fly menace was not being controlled, and that on account of lax administration the Fruit Diseases Act was largely a dead letter.

WESTERN AUSTRALIA.

APPRECIATION has been expressed in Western Australia for the attendance of three delegates to the recent Australian Conference of Fruitgrowers, namely, Messrs. F. E. S. Willmott, F. Simper, and T. Skinner.

Australian Fruitgrowers' Council.

The desire was vigorously expressed for the formation of an Australian Fruitgrowers' Council to decide important matters of policy concerning the export trade.

In particular, this Council would determine the quantity of fruit to be loaded at each port, and thus unitedly co-operate with the shipping companies in the handling of the shipping programme. It is felt that at the present time there is much needless overlapping.

W.A. DRIED FRUITS

AT the June meeting of the West Australian Dried Fruits Board, Mr. F. W. Davis presiding, it was decided to put up Sultanas and Raisins in 2 oz. and 4 oz. cartons to stimulate consumption. It was stated that the Showell anti-grub process rendered packed fruit immune from grubs.

Imperial Fruit Show.—Decided to direct the attention of packers to the Imperial Fruit Show to be held at Leicester, England. It was stated that exhibits from Australia should provide good publicity.

To Increase Sales.—It was decided to seek the co-operation of all women's organisations in city and country to use more dried fruits. It was also decided to request the sanction of the Education Department for recipe booklets to be distributed to senior scholars at State schools.

Inferior Currants.—A report was received from a London agent that owing to the preponderance of "buck" Currants a prejudice was likely to be created against West Australian Currants in British markets.

* * * * *

Members of the W.A. Dried Fruits Board—Messrs. F. W. Davis (Chairman), A. E. Doig, R. J. Lowson, and G. M. Brown—attended meetings of dried fruit growers at Fernhill, Upper Swan, Greenmount, Heversham and Henley Park. At each meeting details were supplied regarding the agreement with packers, agents, distributors and dealers, also publicity.

In view of the report that retailers were charging excessive prices, it was decided to request the Government to amend the Dried Fruits Act, empowering the Dried Fruits Board to determine maximum prices to avoid the exploitation of the purchasing public.

Cordial thanks were expressed to the Board for its good services.

FRUIT EXPORT TO UNITED KINGDOM.

THE fresh fruit trade between London and some of the overseas Dominions has grown to immense proportions. London remains the centre for the Australasian trade, because of the huge local market, coupled with expert distribution.

Cargoes of Apples are discharged at the Royal Victoria and Albert, King George V., and Tilbury Docks by modern types of cranes or by chain and gravity conveyors which lift the cases from the cool chambers of the ships and distribute them to craft for water conveyance or deposit them in the well-lighted, airy and perfectly-equipped warehouses provided by the Port of London Authority. Here they are sorted to merchants' requirements and delivered to railway wagons or vans for conveyance to the London markets, such as Covent Garden, Spitalfields and Borough, which are within easy reach.

As each of the docks referred to is railway connected, fruit can be speedily despatched to any destination.

The representatives of the Port of London Authority in Australia and New Zealand, is Capt. A. W. Pearse, 10 Bligh-street, Sydney, N.S.W.

THE SUGAR EMBARGO.

Opposed by South Australia.

"We appreciate the splendid fight the "Fruit World" is making in opposing the sugar embargo, which affects the fruit-growing industry so adversely."

W. J. KIMBER,
Secretary South Australian Fruitgrowers and Market Gardeners' Association.

"FRUIT WORLD" APPRECIATION.

Dear Sir,—

Enclosed please find cheque for 8/6, being my subscription to the "Fruit World." I have been receiving same for some time, and have found each issue interesting and instructive.

Wishing the "Fruit World" every success.

H.J.N., Donvale, Vic.
14/7/30.

Practical Research Work.

Oil Sprays—Codlin Moth Investigations—Orchard Cover Crops—Peach Harvesting and Storage—Tomato Breeding—Arsenical Residue on Apples—Factors Affecting Set of Fruit—Strawberry and Raspberry Breeding—Fertilisers—Relation of Leaf Area to Size and Quality of Apples.

Interesting Experiences in U.S.A.

IT IS ALWAYS OF INTEREST to have news from America, especially from the Pacific Coast, where conditions are very similar to those in Australia.

The State College of Washington (U.S.A. Pacific Coast), has just issued a bulletin giving the 39th Annual Report of the Agricultural Experiment, Pullman, Wash.

Here is a summary of a few of their investigations.

OIL SPRAYS. (A. Spuler). Experimental work with oil sprays has been mostly concerned with the use of the refined oils for codlin moth control.

Under field conditions the oils have not given satisfactory control for codlin moth when used alone. Five applications of a commercial oil (80-85 viscosity) on Romes resulted in 14.9 per cent. wormy fruit. This should be compared with the check of standard lead arsenate (two pounds to 100) on the same variety, in which the percentage of wormy fruit was reduced to 3.6.

Experience with the summer oils during the past three years indicates that their excessive use is likely to be accompanied by injury to trees and by a reduction in size of fruits. Just how far summer oils may be used is a subject for further study, but at present it appears that two applications of oil (three at most) is about the maximum which can be used during the summer months with safety.

CODLIN MOTH INVESTIGATIONS. (A. Spuler). Previous work had shown that the addition of a semi-drying oil, such as fish oil, would greatly increase the efficiency of such arsenicals as calcium arsenate and magnesium arsenate, materials which, when used alone, have not been satisfactory for codlin moth control. In 1928 it was found that the addition of fish oil to lead arsenate, even when used at the rate of one pound to 100 gallons of water (half the usual concentration), resulted in a degree of control approximately equal to that obtained when double the usual amount of lead arsenate was used. One-fourth of one per cent. of the fish oil was used. Apparently the fish oil tends to hold the arsenical more tightly to the surface of the sprayed Apples. It was necessary to wash Apples sprayed with lead arsenate and fish oil, but the season's work indicated that fruit so treated could readily be brought down to the foreign tolerance by the usual methods of removal by washing.

Ten different tests with nicotine sulphate were included in the Wenatchee experiments in 1928. Used alone, this material gave only about one-half the control obtained by a standard lead arsenate treatment. In order to hold the nicotine longer on foliage and fruit, aluminium sulphate was added in another test, which resulted in greater control, but which was accomplished by a distinct russeting of the fruit. Again, chemical tests at harvest time revealed the presence of nicotine in fruits and leaves; an unexpected angle in the situation.

Nicotine sulphate used in combination with oil, gave uniformly excellent results. Applied at rates varying from one pint in 100 gallons to one pint in 200 gallons (1-800 to 1-1,600) with an oil of medium viscosity (70 to 80) at from one-half to three-quarters of one per cent., the results obtained were equal to, or even better than, lead arsenate. This feature of the seasons' work was most encouraging, since lead arsenate was eliminated from those cover sprays where the oil-nicotine combination was used.

ORCHARD COVER CROPS. (O. M. Morris). The shade under the bearing Apple trees in the Washington orchards retards the growth of cover crops. Deep irrigation ditches placed far apart also make the starting of new cover crops very difficult. A heavy growth of weeds and grass also crowds out the young cover crop. Most of the new cover crop seedings in the irrigated orchards of Washington have failed because of one or more of the above conditions in the orchard.

Two series of plots were established in orchards near Wenatchee in the spring of 1929. The crops used were white blossomed sweet clover, yellow blossomed sweet clover, Hubam clover, lucerne, and hairy vetch. One season does not furnish a basis for definite conclusions. The results, however, indicate that the weeds and grass start early and prevent the cover crop from becoming well established.

White blossomed biennial sweet clover produced the largest amount of vegetation of any of the cover crops used. Hairy vetch more completely covered the soil than any of the other crops. The yellow blossomed biennial sweet clover made good growth, and during the early part of the summer was nearly, but not quite, as heavy in vegetable material developed as the white blossomed clover. In the latter part of the season the yellow blossomed clover did not continue rapid growth, and at the close of the season the crop produced was much smaller than the white blossomed clover. Lucerne produced less than half the vegetable material that either of the biennial clovers produced.

PEACH HARVESTING AND STORAGE. (O. M. Morris). In the summer of 1929 the work on this problem was continued along the same lines as in 1928. Elberta and J. H. Hale varieties were used. Fruit harvested when practically full size and well colored, kept in storage at a temperature of 45 to 50 degrees F. for three weeks and then brought to a temperature of 70 degrees and held for three days, was found to be in good condition and of excellent quality. Material that was harvested as soon as the skin of the Peach showed yellowish or yellowish-orange color and kept in storage for three weeks at 45 to 50 degrees F., and then removed to a temperature of 70 degrees F. was sufficiently ripened for use in three days. This material, however, was uniformly of poor to very poor quality.

Material placed in cold storage at 32 to 33 degrees F. was held for 30 days with very little softening of the flesh but a distinct browning of the flesh around the seed was noticed. This fruit, when placed in a room temperature of 70 degrees, quickly softened, but did not develop a normal yellow color of the variety, and was unsuitable for eating.

Studies were made of the Peaches on the Spokane markets in August and September (February and March in Australia), in 1927, 1928, and 1929. The average condition of the material in the markets in 1927 was 67 per cent. poor, 29 per cent. fair, and 4 per cent. good. In 1928 the material showed 54 per cent. poor, 35 per cent. fair and 11 per cent. good. In 1929, 26 per cent. of the material was poor in quality, 56 per cent. fair, and 18 per cent. good. It is believed that this change is, at least in part, the result of educational work carried on by the department along that line.

TOMATO BREEDING. (C. L. Vincent). In 1927, crosses were made of the Bonny Best and Sutton's Best of All Tomatoes, two of the leading greenhouse varieties grown in eastern Washington, in order to develop a new variety having the shape and high eating qualities of the Bonny Best and the good shipping qualities of the Sutton.

A number of fairly promising seedlings have been selected from this original cross. To date, thirty-seven promising seedlings have been carried through the F2 generation and six other seedlings through the F3 generation. Further selections will be made from the F2 generation crosses from plantings made in the greenhouse during the fall of 1929 and 1930. A few F3 generation seedlings will be sent to some of the greenhouse men in the State for trial tests.

ARSENICAL RESIDUE OF APPLES. (F. L. Overley, J. R. Magness, in co-operation with the Divisions of Entomology, Plant Pathology and Chemistry). The arsenical residue programme during the past season has been on the relation of the spray programme to cleaning. It is quite generally found that the use of oils in the spray programme makes the spray residue cleaning more difficult. This is especially true of Winesap if the fruit is allowed to stand long after harvest, and the natural wax has had a chance to develop along with the oil from the spray. Investigations have been made of different methods and types of heaters for the acid solutions. The use of drying oils as fish oil in combination with lead arsenate is more difficult to clean than the mineral oils that have been used.

FACTORS AFFECTING SET OF FRUIT. (W. A. Luce and F. L. Overley). Individual Cherry trees for pollenisers for the Bing, Lambert and Royal Ann were tested. The variety planted in the district some twenty years ago and sold as the Deacon, gives great promise. Tests will be continued with this variety.

Pear pollination work has been restricted to the Anjou variety as the other standard varieties, Bartlett, Flemish, Bosc and Winter Nelis have always given a satisfactory set of fruit. Past seasons' tests indicate that leaf area is a limiting factor in set of fruit on Anjou. Tests in 1929 show no bloom was produced on spurs with an average of four leaves per spur the previous season. Bloom, but no set of fruit on spurs, with an average of 4.56 leaves, one fruit set on spurs with an average of 5.07 leaves, two to three fruits set on spurs with an average of 5.17 leaves per spur. The addition of nitrogen bearing fertiliser increased the set. The number of leaves and leaf area per spur were increased where nitrogen fertiliser was used.

EFFECT OF OIL SPRAYS ON FRUIT TREES. (J. R. Magness, F. L. Overley, in co-operation with the Division of Entomology). Investigations have been under way for two seasons to determine the effect of oils used in the spray applied in late winter or early spring as dormant sprays and throughout summer as summer sprays on the functioning of fruit buds, foliage and development of fruit.

For two seasons injury has resulted to fruit and leaf buds when an oil with a quick breaking emulsion was applied during a certain period in the development of the buds. Comparisons made with an oil with a permanent emulsion and lime sulphur solution showed no injury. However, any of the oils applied when buds were perfectly dormant proved to be safe.

When lime sulphur was applied as a late dormant spray or in the pink spray for mildew, then followed by summer oils in first or second cover sprays, a heavy dropping of fruit was caused on Stayman, only slight on Jonathan and Winesap, but many leaves on all the varieties turned yellow and dropped.

Branches of Romes and Jonathans having 20 and 15 leaves respectively per Apple were ringed on trees sprayed with various oils and the measurement taken of the fruit every fifteen days throughout the growing season to determine the effect of oil on size.

STRAWBERRY BREEDING. (Max B. Hardy and H. D. Locklin, in co-operation with the Western Washington Experiment Station). There are some 150 varieties and hybrid selections of Strawberries in the variety test and breeding plots. One year's records of yield, color, firmness and size of berries, as well as records of various plant characters, have been obtained of about 50 of these. Similar records of the remaining 100 will be obtained in the 1930 season along with additional records of the original fifty.

Fifty-two crosses were made between varieties with contrasting yield, berry color and berry firmness. The F1 and F2 seedlings of these crosses will be studied to determine the mode of inheritance of these characters.

RASPBERRY BREEDING. (Max B. Hardy and H. D. Locklin, in co-operation with the Western Washington Experiment Station). The study of hardiness in red Raspberry canes has been continued. These studies have been conducted under laboratory conditions, and results compared with observations in the field. Based on the results obtained in the winter of 1929, twelve crosses were made, using the five varieties—Cuthbert, King, Marlboro, Latham and Antwerp—varieties varying from very tender to practically complete hardiness under Western Washington conditions. The seedlings of these crosses will be studied for the mode of inheritance of this character of hardiness.

ORCHARD FERTILISER INVESTIGATIONS. (J. R. Magness and F. L. Overley, in co-operation with the Division of Soils). The third crop has been harvested from one series of plots in east Wenatchee, where nitrogen, phosphate, potash, nitrogen and potash, nitrogen and phosphate, phosphate and potash, and nitrogen, potash and phosphate were used. At the present time nitrogen and phosphate, potash and phosphate, and nitrogen plots are best from the standpoint of tree growth and yield, but not as good as other plots for color.

A new series of plots with these fertilisers have been replicated four times on Jonathan and Winesap in the Wenatchee district. Only one harvest has been made from these new plots. Other plots using different forms of nitrogen, different amounts of nitrogen and different times of application have been started on Romes and Jonathans. The following measurements and data are being taken from the various fertiliser plots: circumference and terminal growth of trees; yield of fruit in number, size and total weight including thinnings; color;

pressure test for maturity; storage tests; drop, including early season drop and drop at harvest time; fruit set; fruit bud injury; leaf burning or scorching; chemical analysis of buds and fruit; all correlated with a study of soil and moisture.

RELATION OF LEAF AREA TO SIZE AND QUALITY OF APPLES. (J. R. Magness, F. L. Overley and W. A. Luce). Definite leaf areas per fruit are being studied on Delicious, Winesap, Jonathan and Rome Apples; Anjou, Bartlett, Winter Nelis and Comice Pears; and Lambert Cherries. About twenty-five thousand measurements of fruits were taken during the season. The results show considerable variation in the number of leaves required per variety to grow the size and color of fruit desired for the variety. For example, fifteen to twenty leaves per fruit will produce an average size Jonathan, while Delicious will require about forty-five leaves per fruit for the most desirable sized fruit.

Insect Pest Control

Pea Mite.

During the last few years these mites have spread rapidly in Victoria, and have done much damage to vegetable and other crops. The body of this mite is of a deep, dull blue color, with rather long red legs. The mites run rapidly when disturbed and soon get out of sight, hiding in crevices or under lumps of earth. Clift's manurial insecticide, either dusted over the ground or worked into the soil by a seed drill, will be found most effective against these pests. The following has also given good results: When the mites first appear, the land should be deeply ploughed, and weeds, especially Cape Weed, kept suppressed, as the mites breed on these. They will not live for any time on clean cultivation, but will fairly quickly migrate across it to vegetable gardens, dirty headlands, etc. Any plot freed from the mites by cultivation or other treatment may be kept free by placing a trail of creosote or a mixture of kerosene or phenyle about four inches wide right round the plot. The mites will not be able to cross this for a few weeks. One part of carbolic powder, three parts of lime, super, or gypsum, broadcasted over the plants and worked into the soil at the rate of 2 cwt. per acre will be found very effective.

Tobacco dust (pestend) and lime in equal quantities have been used in a similar way with some success by vegetable growers.

Nicotine sulphate, 1 lb. in 80 gallons of water, in which 3 lbs. of soap has been dissolved, makes a good spray against mites.

It should be remembered that all the above are contact insecticides, and only kill the mites that are present at the time. The treatment should be repeated after about a fortnight to kill any mites hatched meanwhile and any that may have escaped.

Thrips.

Thrips cause flowers of Tomato and other vegetables to turn brown, shrivel up, and fall. They are particularly destructive to the flowers of Beans and Peas. This insect has a habit of crawling into the centre of the flowers, and this makes it difficult to deal with. The following remedies have proved successful:—Benzole emulsion, 1 lb. to five gallons of water. To prevent thrips from depositing their eggs in slits or other well-concealed positions, use tar impregnated water, nicotine sulphate, or black-leaf 40 on the stems and foliage.

RE-WORKING FRUIT TREES.

Danger from Fungus Polystictus Versicolor.

Some Helpful Suggestions.

IN THE RE-WORKING of fruit trees there is danger from fungous infection, particularly polystictus versicolor, which has done much damage and is unfortunately spreading in Victoria. Attention was recently directed to the spread of this fungus in the Mornington Peninsula. Now it is reported as becoming prevalent in Harcourt.

As a contribution of interest on this subject, Mr. Jas. H. Lang, of Harcourt, sends the following notes.

A grower wrote to the Pacific Rural Press (California), stating that several years ago a bad job of pruning had been done in his Apple trees. The stubs began to decay, until now there are a number of bad cases: how can they be cleaned and filled?

The reply given was as follows:—

Cavity filling is practiced in many instances where it is desired to save valuable trees, but to be worth the trouble and expense, work must be carefully and correctly done. There are those, in places of high authority who doubt that such work is ever worth while. However, we see no reason why you shouldn't do a bit of it if you have the time and inclination. There is nothing to lose and something to gain.

Essentially, the procedure consists first in chiselling out all decayed wood. This is important. If the work is not done thoroughly, decay will continue under the filling. In chiselling, the cavity must be properly shaped or cupped to retain the filling, with the opening somewhat smaller than the inside diameter; or re-enforcing with nails or wire is necessary. After the cavity has been cleaned out and shaped, drench it with a 1-500 solution of bichloride of mercury. After this has dried, coat the walls with a good asphaltum paint, and when this is set, fill with concrete, not too moist. Work it thoroughly into all crevices and smooth the outer surface flush with the wood surface, and not with the bark surface. Allow the bark to project its normal thickness and trim it to live tissue so that healing will begin immediately and new bark will roll over the concrete just as if it were exposed wood.

This is just a sketch of the method, and there are many details to consider. For example, the matter of drainage by the insertion of a tube or the cutting of a channel at the base of the cavity, to allow any moisture to escape. United States Department of Agriculture Farmers' Bulletin 1178 "Tree Surgery" offers an excellent discussion of the fine points of cavity filling, and can be had from the Superintendent of Documents, Government Printing Office, Washington, D.C., for the price of 5 cents.

We would not advise spending any time on cavities in secondary branches. Just treat those in the main trunk or important primary scaffolds, where the death or breakage of a member would seriously impair the shape and life of the tree. And hereafter, wash pruning wounds with the bichloride of mercury solution, and later in the season when wound surfaces have dried and seasoned, apply a good asphaltum tree paint. Re-paint at intervals in following years. Prevention of decay is better than cure, as your own experience will testify.

New Zealand.

N.Z. Apples for Canada.

A SHIPMENT of 11,000 cases of Delicious Apples, 150/153, was forwarded from New Zealand to Halifax. The fruit arrived at the end of June in splendid condition. The sale was on an f.o.b. basis.

N.Z. Fruit for South Africa.

23,000 cases of Apples were sent per the steamer "Hororata" from Wellington at the end of June, this being the final export shipment of the season. These had been held in cool store by request of the South American agents, who found that the May consignments were too heavy for effective marketing.

* * * * *

The growth of the New Zealand Fruitgrowers' Federation was reviewed by the President (Mr. T. C. Brash) before the recent Dominion Conference.

In 1921 the capital was £1,940, gross profits from trading £829, total sales £6,625. For 1929 the sales total was £120,000, gross profit £12,000, capital £16,600.

The growth of export was phenomenal, the figures being:—

1923	135,020	cases
1924	241,253	,,
1925	232,881	,,
1926	728,985	,,
1927	538,693	,,
1928	1,019,137	,,
1929	989,709	,,
1930	1,300,000	,,

Appreciation was expressed for the services of the manager, Mr. H. Napier.

FEDERATION DIRECTORS.

All Returned Unopposed.

The retiring Directors of the N.Z. Fruitgrowers' Federation received an excellent vote of confidence when they stood for reappointment and were returned without opposition. The results of this uncontested election were as follow:—

T. C. Brash, Nelson; T. H. Torode, Marlborough; A. M. Robertson, Hawke's Bay; W. A. Tate, Wellington.

FROST FIGHTING IN NEW ZEALAND.

Mr. Lloyd Williams, Orchard Instructor, Alexandra, N.Z., who has conducted many frost fighting experiments in Central Otago, recently gave an interesting address before the Canterbury Fruitgrowers' Association. His conclusions were that the best method was the use of a large number of small fires, as they gave a more even distribution of heat. Experiments with benzine tins had not been satisfactory, the flame being very erratic. With properly constructed pots they had been able in Central Otago to raise the temperature from 3 degrees to 6 degrees with 80 to 100 pots to the acre. Ordinary fuel oil was used.

The main objections to coal were that it was more expensive than oil, that once lit it had to burn out, and that it is bulky, which involved questions of storage. The oil used cost 9d. per gallon on the orchards in Central Otago; the cost would not be so high in Christchurch and vicinity.

The rate of consumption was one quart her hour. He described the fire pots used in Central Otago, and said that they cost, landed at Alexandra, £9 per 100; in thousand lots there was a discount of 7½ per cent., making the cost 1/9 each. He described the alarm system, and said that the cost of the special thermometer was between £8/10/- and £9. In Central Otago they had to put the pots out early in August, and to be safe they had to remain out till the end of September.—"N.Z. Orchardist."

"AUSTRALASIAN POULTRY WORLD."

An Excellent Publication.

THE anniversary issue of the "Australasian Poultry World," published this month, is now on sale at all news agents at 6d. per copy.

It contains much of interest to both the novice and more experienced poultry breeder, and comprises 56 pages of brightly written information and an attractive colored cover. Features of the issue are:—Monthly Reminders, The Breeding and Management of Muscovy Ducks, The Black Orpington (Part 2), Hatching and Rearing Bantams, Around the Farms (illustrated), Rearing Healthy Chicks, Trap-nests and How to Build Them (illustrated), Sanitation on the Poultry Farm, Chilled Egg Regulations, Household Hints, and Children's Page, reports of shows and egg-laying competitions.

The "Australasian Poultry World" is published monthly by the Horticultural Press Pty. Ltd., Box 1944, G.P.O., Melbourne. Specimen copies are obtainable gratis on application.

HAILSTORM INSURANCE.

The thirty-fifth annual general meeting of the Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation Ltd. was held at London, on April 10, with Mr. H. B. May, V.M.H., in the chair. There was a good attendance of shareholders.

The Chairman reported that there had been an increase both in premium income and interest on investments. Disastrous storms, accompanied by hail, had occurred during the year, and claims made on the corporation had been of varying severity. One claim had been settled for £900. The amount of re-insurance had been still further increased, so that policy holders and shareholders were in a strong position, and in comparison with many other insurance companies, the guaranteed protection, as compared with the liability, was unique.

A dividend of 2/- and a bonus of 1/- per share, less income tax, was declared. £1,000 was added to reserve, and the balance, £577/18/4 carried forward. The retiring directors, Messrs. Chas. H. Shoults, T. P. Trounce, and Alfred Watkins, were re-elected.

(As from April 24, the registered office of the company will be 5 King-street, Covent Garden, London, W.C.2.)

The buds may blow and the fruit may grow,
And the autumn leaves drop crisp and sere,
But whether the sun, or the rain or the snow,
There is ever a song somewhere, my dear.—J. W. Riley.

Victoria.

VICTORIAN FRUIT EXPORT.

A Record Season—1,076,369 Packages.

Too Many Varieties Shipped.

Grading for Color Suggested.

At the monthly fruit industry luncheon of the Victorian Fruit Marketing Association, the Superintendent of Horticulture, Mr. J. M. Ward, delivered an interesting address on Apple and Pear export. He said the export of fruit from Victoria in 1930, was a record, an aggregate of 1,076,369 packages having been shipped—an excess of 51,375 over the previous record in 1928. The actual export figures for the 1930 season were as follow:—Apples: 877,469 cases to the United Kingdom and Continental markets, 12,743 cases to other countries (a total of 890,212 cases). Pears: 150,504 to England, 3,966 to other ports. There were also 31,687 cases of other fruits sent to various places. London received the largest shipments (346,715 packages), and Hamburg the next (190,943 packages).

There had been a decided improvement in the packing, continued Mr. Ward, an honest effort having been made by growers to improve their pack. A total of 61 varieties of Apples and 21 kinds of Pears were shipped; it would be better to confine export Apples to a comparatively few varieties in large lines, as was done by the chief exporting American and Canadian districts. Mr. E. E. Meeking, senior fruit inspector, who was on a visit to England, had written after visiting the Hamburg markets that he was convinced that grading for color was the most important method of all. This, of course, meant a complete alteration in present methods in vogue in Australia, as it involved growing, as well as picking, for color. The Americans grew many Winesaps, Newtown Pippins and Cleopatras, so that they could get long, uniform lines of red, yellow and green Apples.

In conclusion, Mr. Ward congratulated Mr. R. E. Fowler on winning the Colombie Cup for the best packing in Victoria.

A hearty vote of thanks to the lecturer was conveyed on the motion of Messrs. C. M. Griffeth and R. E. Fowler.

SOUTHERN VICTORIAN FRUITGROWERS' ASSOCIATION.

At the annual meeting of the Southern Fruitgrowers' Association, at Box Hill, on July 10, Mr. W. A. Webb presiding, the Hon. A. E. Chandler critised the Melbourne City Council and the Markets Superintendent, Mr. Minns: the regulation calling for the grower to vacate his stall by 8 a.m. was harassing.

Mr. Minns, in reply, regretted the attack by Mr. Chandler: he was actively co-operating with growers in their interests for market improvement.

Mr. R. G. Menzies, M.L.A., said the Federal Government was wrong in increasing taxation instead of reducing expenditure. Mr. Knox, M.L.A., said that primary producers who were the backbone of Australia, could alone pull Australia out of her troubles. Mr. W. H. Everard, M.L.A., congratulated the growers on their improved export pack, and Mr. J. M. Ward, Superintendent of Horticulture, on his services.

Spraying Experiments.—Mr. Ward gave a review of the successful spraying experiments with arsenate of lead and white oils at the orchards of Messrs. T. H. Petty and W. A. Thiele.

Mr. Albert Tully said, although his name had been listed for 20 years, he had not been allotted a stand in the Victoria Market. Mr. G. Fankhauser said that markets conducted by private enterprise at Camberwell were better than kerb markets.

Office-bearers were elected as follows.—Mr. L. Pepperell (President), Mr. W. A. Webb (Past President), Committee: Messrs. G. Mock, R. M. Finlay, W. J. Nankervis, O. White, A. J. Leber, and W. A. Thiele; Secretary, J. W. Aspinall.

PEST CONTROL AT HARCOURT, VIC.

Codlin Moth and Red Spider.

Mr. H. Ford, Koongal Orchard, Harcourt, Vic., recently perused some publications from America on pest control, and now writes as follows:—

Codlin Moth.—The American investigations strike me as being conclusive to our own examinations. (1) That there is often a succession of broods of grub, the same being subject to seasonable conditions. This was very evident here during the past season, when activities of grub were not noticeable up to Christmas. (2) Unless conditions are favorable to the emergence of moth, the calyx spray seems a waste of material and labor.

Though moth traps will be more generally used now, we have been spraying according to a safe programme:—Calyx spray, and successive sprays in intervention of from fourteen days to three weeks. But now that we have necessarily to cut down cost of production to a minimum, I think each orchardist will be more observant, and will spray only when the moths show evidence of their activity.

Further to "moth" control, I believe that cleanliness in the orchard can be achieved by:—

(1) Removal of loose bark from trees, and forks thereof during pruning, when numerous grubs will be found.

(2) Clean props, if they have been used.

(3) Bandages, or paper in forks of trees, regularly inspected, and grubs therein destroyed.

These precautions, in conjunction with efficient spraying, are bound to give good results.

Re Red Spider.—There is no doubt, but that the white oils in summer sprays are a boon, and will eradicate this pest, resulting in a good healthy green foliage, and very few falls.

We appreciate the results of experimental work, and regard the results as the basis of price.

NEW MELBOURNE MARKET.

Fruit merchants have to thank Cr. William Cockbill for the removal of the plantations in Franklin-street, directly opposite the new markets. Had the plantations remained after the wholesale fruit markets were opened, there would have been considerable congestion to traffic. Cr. Cockbill recognised this fact, and, despite his love for trees and flowers, fought for their removal in face of considerable opposition from Cr. Marks and others.

VICTORIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at Melbourne on July 25. There were present Messrs. J. M. Ward (Superintendent of Horticulture), J. W. Bailey, W. H. Carne, G. W. Brown, H. Ford, K. Eagle, R. E. Fowler, C. M. Griffeth, F. R. Mellor, W. A. Webb, and the Secretary (Mr. R. E. Boardman). Mr. F. R. Mellor was elected Chairman. Apologies were received from Messrs. Mills, Lawford, and Cave, on being absent in the country, and Mr. A. S. Harrison, through illness.

Pear Export.—The Superintendent of Horticulture wrote stating that there were no regulations to enforce the precooling of Pears, but such could be brought about by educational propaganda.

The Secretary reported having noted press statements to the effect that Goulburn Valley fruitgrowers' associations were proposing to send 20,000 cases of Pears in the next export season, and that he had written to establish touch with them.

Organising Harcourt.—The Secretary stated that on a second visit to Harcourt an additional 29 members had been linked up, making the total over 80 for that district. The assistance of Harcourt foundation members—Messrs. K. Eagle, H. Ford and F. Gaasch—was highly esteemed.

Mr. Ford stated that plans are being considered for linking up the growers in Elphinstone, Sedgwick and other local centres.

Freight on Softwood Cases.—Mr. H. W. Clapp (Chairman of Commissioners, Victorian Railways) replied, stating that the request of the Association for the reduction of freight on softwood cases be made retrospective for the export season just closed, was receiving consideration.

Annual Meeting.—A letter was received from Mr. Clapp, kindly consenting to address the annual meeting on September 26, and asking what time it would be most suitable. Decided to invite Mr. Clapp to luncheon and ask him to speak then.

Packing Instructors.—The Assistant Minister for Agriculture (Mr. Pollard) wrote stating that owing to the financial position, it was impossible to appoint additional packing instructors just now. An instructive booklet had been issued, however, to assist in improving the packs.

Inspectors in Ships' Holds.—The Assistant Minister for Agriculture wrote, stating it was hoped that next season it would be possible to make arrangements for inspection and supervision in the holds of steamers when fruit is being stowed.

Mr. Bailey stated that some of the stevedores apparently were not aware of the damage caused to fruit by careless handling. The men seemed respectfully anxious to do their work well. Mr. Ward said the improvement in the loading during last season's export was highly satisfactory. He had found it necessary on occasions, however, to request the use of walking planks, especially when stacking to finish the hold. On the motion of Messrs. Ford and Eagle, it was decided to write to the Stevedores' Association, expressing appreciation of the action of the stevedores because of their carefulness in handling last season's export.

Proposed Australian Fruit Export Association.—The Secretary stated that the other States were interested in the proposal to form an Australian Apple and Pear Export Association. After discussion, Mr. Fowler stated the sub-committee was drafting proposals to examine the possibilities and powers necessary, the report to be presented to next meeting.

Primage Duty and Sales Tax.—The Secretary stated he understood that wool packs, dried fruits and certain other commodities were free of the sales tax. Growers had requested that an effort be made to prevent the imposition of sales tax on fertilisers and spraying oils. The Chairman stated the Association, having been successful in preventing an embargo on imported softwood shooks, the timber interests were now endeavoring to create difficulties regarding primage charges, etc. On the motion of the Chairman, seconded by Mr. Fowler, it was decided that the Government be asked to—

(a) Exempt all fruit cases from the sales tax.

(b) And that any primage duty that may be put on imported shooks should be refundable on re-export.

(c) It was further decided, on the motion of Messrs. Carne and Ford, to request the Federal Government not to charge any primage duty or sales tax on fertilisers or spraying materials used in connection with fruitgrowing.

The motion was carried, and it was further decided to send copies of the resolution to Messrs. Holloway, Crouch and Keane, M's.H.R., and Senator Lawson.

Fruit Cases.—The Chairman stated that the softwood cases weighed about 7 lbs., hardwoods from 15 to 20 lbs., thus increasing the duty on fruit entering Germany by 5d.—on the weight of the case alone.

Next Meeting.—Decided that the next meeting be held on Friday, August 29, and that Prof. Wadham (Agriculture), Melbourne University, be asked to speak at the monthly luncheon. Motion, Messrs. Brown and Bailey.

COLOMBIE APPLE EXPORT COMPETITION.

IN ORDER TO ENCOURAGE growers to adopt improved packing methods, an Apple export competition is conducted by Mr. H. G. Colombie on behalf of his overseas principals. Points are given throughout the season for casing, labelling, wiring, packing, grading, quality, and freedom from blemish, etc. No fee is charged, and every exporter has an equal chance, as his fruit is awarded points at the ship's side during export.

The judging, which is continuous, is done by Mr. J. M. Ward, superintendent of Horticulture.

For the 1930 season, Mr. R. E. Fowler, of Pomonal, has again been successful in securing the first prize. The general "get-up," packing and cleanliness of his fruit was easily the most consistent in the State.

The second prize went to the Peninsula Co-op. Packing Co., Somerville, and the high standard of packing was wonderfully consistent for such a large staff employed at this shed.

The Harcourt Fruit Supply Society Ltd., Harcourt gained third prize. This shed has reached a very high standard of efficiency.

Very Highly Commended.—J. Cowan, "Park View" Orchard, Bacchus Marsh; the Tyabb Packing Co., Tyabb.

Commended.—Messrs. Ford Bros., Harcourt; W. J. Cox, Pomonal; A. G. Robinson, Narre Warren; J. W. Bailey, Narre Warren; A. V. Fullard, Narre Warren; G. Priest, Pakenham; Hines Bros., Pakenham.

APPLES.

Wonderful Health Properties.

(By Dr. Geo. E. Payne Philpots, Founder of The Australian Better Health Association.)

(Copyright.)

THE Australian Apple is a powerful factor in the prevention of dental caries (decay of teeth), when taken at the end of a meal. The scientific explanation is as follows:—The mechanical action of chewing the flesh, aided by the juice, removes the remaining particles of food, such as starches and sugars, which are a potent cause of dental caries.

As soon as a portion of an Apple is taken into the mouth, it at once stimulates a vigorous flow of saliva, which is nature's method of washing out the mouth; this flow lasts for about 30 minutes, during which time the mouth is well cleaned.

The mouth having been cleaned by the acid of the Apple, causing a vigorous flow from the three salivary glands, nature once more instructs the flow of saliva to steady down, and only supply enough to keep the mouth moist, at the same time diminishing the acid in the saliva and making it neutral or slightly alkaline.

Therefore, to promote a normal saliva, there is nothing better than Apple juice, and you can go to sleep knowing that your teeth are bathed in a non-acid saliva and no harm can come to them.

On the other hand, those who end their meals with a fermentable carbo-hydrate, such as starch or sugar, without eating an Apple at the end of a meal, leave a film of food surrounding the teeth, the saliva, lacking any help from Apple juice, finds it very hard to properly clean the mouth and teeth.

The lactic acid producing germs, which are always present in our foods, begin to grow and multiply in great numbers in this remaining debris of food; the starch becomes turned into sugar by a ferment in the saliva; these sugars become turned into lactic acid. The acid causes the mucein, which is held in solution by the saliva, to become precipitated all amongst the food, and becomes firmly secured to the tooth surface (called bacterial plaque).

The supply of lactic acid now becomes more abundant, and it slowly, but surely, erodes the enamel or outer covering of the tooth, thus allowing other germs, which live in the mouth, to get a hold in deeper structure of the tooth (dentine). If this condition is not prevented by eating an Apple after each meal, it is only a matter of time when the inside of the tooth becomes soft, like leather soaked in water. One day a big crash is experienced, with acute toothache, and often the tooth is too far gone for the dentist to save.

Therefore, assist nature to preserve your teeth by eating a good Australian Apple after each meal. This rule should be faithfully carried out with children, and when they reach the age of 2½ years, they are well infected with the Apple habit, and will ask for an Apple after each meal. If uncooked Apples do not agree with any particular child, a baked Apple will have the same good effect.

These remarks apply to all fruits, cooked or uncooked.

Fruit Shipments
United Kingdom
and the Continent

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& CO.
24 Southwark St , London Bridge,
LONDON, S.E. 1.
AND HOBART, TASMANIA
Solicit Consignments
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

F. W. Vear
Fruit & Vegetable Salesman
Commission Agent
WESTERN MARKET
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Highest Market Rates Assured
Prompt Settlements

HAMBURG
(GERMANY).

Ph. Astheimer
And Sohn,
Fruit Brokers . .
and Auctioneers
(GERMANY)
Established 1863.
Largest receivers of Australian, Tasmanian, and American APPLES.
Foreign Apples a Speciality.

HEALTH VALUE OF APPLES.

THE Victorian Railways Department, in conjunction with the Fruitgrowers' Cool Stores Association, recently issued a valuable Apple Recipe Booklet. Many of these booklets were distributed at the recent Fruit and Flower Show. The foreword reads as follows:—

"Just reflect. An Apple is a natural and delightful medicine. It contains mineral salts which keep the blood and tissues in proper condition. It contains vitamines, the stored sunlight which is essential for good health. And it contains acids which promote appetite and aid digestion.

"Then the teeth. The acid of an Apple stimulates the salivary glands, whose actions helps the fibrous particles of the Apple to wash away clinging foodstuffs from the teeth. In addition, dentists tell us that Apple-eating is one of the most effective ways of encouraging the normal growth of the teeth.

"And yet Victoria—meaning you and me and all of us—eats only a quarter of an Apple a day per head. It's not enough. Not nearly enough. We can't start thinking it's nearly enough until we're eating—all of us—at least one whole Apple a day."

QUEENSLAND.

SUPPLIES OF FRUIT and vegetables are received in substantial quantities from Queensland in Melbourne by special trains.

Included are Bananas, Pineapples, Mandarins, Grapefruit, Custard Apples, Sugar Cane, Beans, Tomatoes, Passion Fruit, Papaws, Granadillos, Sweet Potatoes, Chokos, Peanuts, Guavas and Ginger. The quantity from end of June to July 26 totalled 1,332 tons.

The Queensland citrus season has finished, only a few cases of Grapefruit coming along. Prices range from 8/- to 11/- per bushel.

Beans.—As many as 1,300 cases of Beans arrived in a week. The early arrivals were nearly all in bad order, due to sweating. This condition is attributed to the continual wet weather being experienced in Queensland. Many growers have made cases with insufficient ventilation. They have not allowed the air to circulate amongst the vegetables. Later arrivals were in much better order, the wholesale price being from 5d. to 7d.

STRAWBERRIES IN COLD STORAGE.

Success With Shipment of Strawberries from Brisbane to Melbourne.

OF GREAT IMPORTANCE is the success which attended the trial shipment of Strawberries which arrived under cold storage conditions from Brisbane, per s.s. "Canberra," in Melbourne, on July 24.

These Strawberries were packed in large biscuit tins, hermetically sealed and carried at a temperature of 30 to 35 degrees Fahr. They arrived in perfect condition, and were sold at satisfactory rates.

It is expected that future consignments of this nature will take place, and it is hoped to develop the Strawberry trade between Brisbane and Melbourne.

Palmwoods.

FIRST QUALITY PINEAPPLES and citrus were on view at the Palmwoods show early in July, which was opened by the Minister for Agriculture (Mr. Walker).

The Bananas were deemed to be only fair. For the best case of Cavendish for Melbourne market the prize-winners were:—Mr. C. Menary 1, and Mr. A. Barson 2. Cavendish for Sydney market, Mr. J. Stemp 1, Mr. J. Barson 2.

There were six splendid trophies for Pineapples, the prize being finally divided by F. Nicklin and J. L. Smith. The judge (Mr. H. Wilmott), in writing to the "Australian Fruitgrower," speaks in terms of high appreciation of the quality of the Pineapples. A vast improvement has also taken place in the packing and grading.

In the citrus section, Mandarins of high quality were featured. Excellent Grapefruit was shown. Mr. R. Dunning's packing, particularly in the Canadian bushel case, was favorably commented upon.

Prizes were awarded for case citrus, also table citrus. The varieties included Washington Navels, Jaffa, Mediterranean Sweet, Early and Late Valencias, Seville. Mandarins: Emperor, Scarlet, Beauty of Glen Retreat, King of Siam, Fewtrell's Early.

Other exhibits included Villa Franca and Lisbon Lemons, Sweet Rind Lemons, Limes, Citrons, Grapefruit, Cumquats, etc.

MR. G. H. PRITCHARD DIES.

Sugar Industry Champion.

The death of Mr. G. H. Pritchard, General Secretary Australian Sugar Producers' Association, was announced early in July in Queensland. Mr. Pritchard had an intimate knowledge of the sugar industry, and for many years he was a doughty champion on behalf of the industry.

Mr. Pritchard is credited with much of the success in securing a measure of Imperial preference for Empire sugar. Before his activity with the sugar industry, Mr. Pritchard was a successful banker.

The passing of Mr. Pritchard is a distinct loss to the Australian sugar industry.

BANANA "BUNCHY TOP."

Damage in Queensland.

The Minister for Agriculture (Mr. Walker) promised to inspect the Banana plantations in the Currumbin and Upper Tallabudgera Valleys to decide whether two inspectors shall be stationed there. This promise was given to a deputation, when Professor Goddard stated that if protection were not given to growers in these valleys against loss through bunchy top, the Banana industry would be wiped out except in the extreme northern portion of Queensland, in about five years.

Do not run any Financial Risk with your Fruit
but Consign it to

HEDLEY GEEVES LIMITED

Telegraphic Address:
"Apples, Brisbane."
(Hedley Geeves, Managing Director)
Registered Shipping No. 6.

FRUIT EXCHANGE——BRISBANE

SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

Tasmania.

State Fruit Advisory Board.

A MEETING of the State Fruit Advisory Board was held at the Department of Agriculture, Hobart, on July 15, 1930. There were present:—Messrs. B. J. Pearsall, M.H.A., B. H. Saunders, A. Davies, W. H. Calvert, P. Beauchamp, rep. (J .P. Piggott), E. Ross, rep. (F. Peacock), N. Campbell, M.H.A., T. J. Eddington, O. Morrisby, V. Skinner, A. H. Weedon, P. H. Thomas (Secretary).

Royal Commission.—By resolution, the State Government was thanked for appointing a Royal Commission to enquire into all phases of Tasmanian fruit export. A sub-committee (Messrs. Pearsall, Davies, Eddington, Campbell and Saunders), was appointed to watch the interests of growers.

The annual report and balance sheet were adopted

Direct Shipments from Port Huon to Overseas Markets.—On the motion of Mr. Campbell, seconded by Mr. Weedon, it was decided to vote £100 to defray the expenses of a member of the Board and two fruitgrowers' representatives to proceed to Sydney to interview the Overseas Refrigerated Tonnage Committee, with a view to obtaining adequate shipments of fruit direct from Port Huon to overseas markets. It was decided that Mr. A. Davies or Mr. V. Skinner be appointed as the delegate from the Board.

Co-operation With Agricultural Bureau.—Messrs. A. H. Warner, A. C. Blacklow, A. B. Barnett and R. Winspear (Agricultural Bureau), interviewed the Board, and it was decided to recommend, in view of the necessity for unified action, that the election of the Advisory Board be conducted by the Agricultural Bureau.

Fruitgrowers' Conferences.—Decided that these be held:—Hobart, August 12; Launceston, August 14.

Wharf Representatives.—Mr. T. Burnsby attended and presented the joint report of Mr. Bostock and himself in regard to export and making recommendations for improvement. Report received and representatives thanked.

Imperial Preference.—On the motion of Messrs. Saunders and Ross, it was decided to request the Prime Minister to endeavor to secure, at the Imperial Conference, some form of preferential treatment for Australian-grown Apples, else American cold-stored fruit would eventually drive the Australian product off the market: suggesting that either the United Kingdom markets be reserved absolutely for Empire fruit during the months of April, May, June and July, or that an import duty of 5/- per cwt. be placed on all foreign grown Apples and Pears for that period.

"Trojan Star" and "Canonesa."—Owing to the reported bad condition of the fruit on these vessels, it was decided that a copy of Mr. Bostock's report in regard to conditions witnessed during loading, be sent to the Agent-General and the National Fruit Federation.

EXCHANGE ON FRUIT EXPORTS.

Notice of the following motion was given by Mr. Campbell to be brought forward at the next meeting:—"That a case be prepared by the State Fruit Advisory Board to test the claims of fruitgrowers to the full benefit of the exchange rate during the 1930 shipping season,

The Clyde Simplex Driers

For Drying
Fruit Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

Simple - Self Contained

Made in Sizes to Suit

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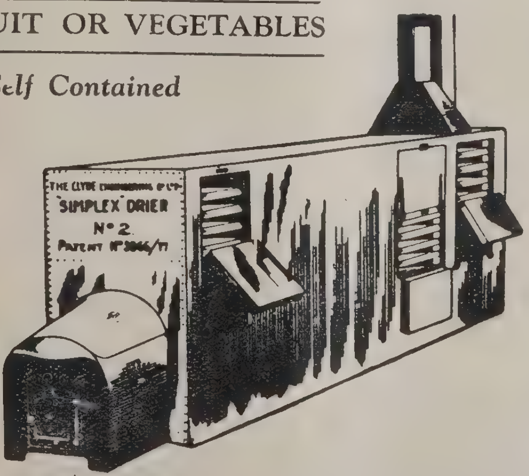
Large Factories

The
Clyde Engineering Co. Ltd.
GRANVILLE, N.S.W.



and which rate is favorable to the exporter. Further, that fruitgrowers who have not received this as a credit on their returns, be invited to communicate with the Board."

TASMANIAN FRUIT INDUSTRY.

Royal Commission Appointed.

THE Tasmanian Government recently decided, at the request of the State Fruit Advisory Board, to appoint a Royal Commission to investigate matters connected with the overseas export of fruit. The Royal Commission consists of Mr. Justice Clark and Mr. Chas. E. H. Ferguson, accountant of the firm of Wise, Inglis and Ferguson.

Scope of the Commission.

The Premier (Hon. J. C. McPhee), stated that the scope of the Commission is to inquire into and report on the distribution, marketing, and exportation of Tasmanian Apples and Pears, including the operations of producers, shippers, shippers' agents, fruit brokers, stevedores, carters, dealers, and others connected with the fruit industry, and to inquire into and report upon:—

(a) Method in use of allotting shipping space to fruitgrowers.
(b) The congestion of fruit at the wharves during the export season.
(c) Carriage of fruit during the season.
(d) Shipment of fruit to ports other than those to which it was consigned, and by vessels other than those by which it was consigned.
(e) All charges made and levied for fruit consigned for exportation.
(f) And all other matters and things incidental to the foregoing.

"FRUIT WORLD" APPRECIATED.

Dear Sir,—Herewith postal note for 8/6, being renewal of my subscription to the paper. Thanking you, and wishing you continued success with the paper, which I consider a decided boon to the orchardist.—Yours, etc. (signed), J.C.I., Spring Hill.

RASPBERRIES IN JULY.

The "Lloyd George" Variety is Doing Well in Tasmania.

SOME CHOICE RASPBERRIES were exhibited at the Department of Agriculture during July. The fruit came from the Government's experimental plot at Kettering. The variety is "Lloyd George," imported from Scotland some years ago. This variety normally bears two crops in a season, fruiting on last year's canes, and also on the tips of the current season's growth.

During the present season the latter have continued fruiting right through the winter at the end of July, bunches of canes, with the ripened fruit adhering, were gathered by the Chief Horticulturist (Mr. P. H. Thomas), the berries being large and of excellent flavor.

During the coming season it is proposed to test this variety, together with several others, in respect to its yield and suitability for processing into jam and preserves.

We are advised by the Neptune Oil Co. Ltd. that the address of the Hobart office is 15a Elizabeth-street, Hobart, Tasmania.

AUSTRALIAN FRUIT IN ENGLAND.

INTERVIEWED IN LONDON by the Australian Press Association, Mr. H. G. Colombie, President of the Victorian Fruit Marketing Association, stated that the Canadian standard case was generally preferred, as the proportion of ullage was much smaller than with the old hardwood case, and bruising was much less apparent.

The decline in Apple prices in mid-June was due to the large quantities of fruit which arrived from Australia and New Zealand coincidently with heavy supplies of Strawberries and Cherries. Some Tasmanian steamers carried excessive quantities—one had a cargo of 200,000 cases. Much of the fruit was in a faulty condition. Black spot was noticeable.

Keep your face with sunshine lit,
Laugh a little bit,
Gloomy shadows oft will flit,
If you have the wit and grit,
Just to laugh a little bit.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
56 and 58 WESTERN MARKET, WILLIAM ST., MELBOURNE.
Branch at Victoria Market.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
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Tasmanian Apples
Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.
E. R. COTTIER Pty. Ltd.
88 COLLINS STREET,
HOBART - - TASMANIA
Tel. add. "ERCOT," Hobart.
Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
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Melbourne

CODLIN MOTH AND RED SPIDER.

Experiments in Tasmania.

EXPERIMENTS designed to test out the efficacy of summer oils, either alone or in combination with arsenate of lead, for codlin moth control, were conducted by Messrs. P. H. Thomas, P. D. Raphael and H. A. Turner, of the Tasmanian Department of Agriculture.

An interesting report has been prepared giving the details. Summarised, the experiments showed that the summer oil emulsions exercised some control of the codlin moth, but alone were not adequate. Arsenate of lead followed by summer soils was only moderately successful. The arsenate of lead and summer soil combination proved very satisfactory, practically eliminating the codlin moth wherever applied.

Red Spider.—Summer oils alone are not deemed sufficient to control summer infestations by red spider, lime sulphur flour paste being more efficient.

There was no damage to fruit or foliage in using summer oils, on the contrary, trees were healthy, and the fruit singularly bright. An early leaf fall occurred where arsenate of lead powder 1/25 was used.

The experiments demonstrated conclusively that the spreading and adhesive properties of the oil greatly add to the efficiency of the arsenate of lead. "Fluxit," a new commercial spreader for arsenate of lead, was also tried out successfully, and gave good control.

Spray Materials.—We have been informed by the Victorian agents for the California Spray Chemical Co., who produce the "Volck" spraying oil, that products to be marketed by them this season include:—

The original Volck spraying oil; "Orthol-K" spraying oil (for control of codlin moth); "Klenup" spraying oil; Volck's "Ortho" arsenate of lead; Volck's one package Bordeaux, and the "De Monte" liquid sprayer, which is the latest product perfected by the research staff of the California Spray Chemical Co.

We understand that this spreader, which has been specially made for use with arsenate of lead and oil, has proved very successful in America, where it was subjected to severe tests before being marketed. Enquiries are welcomed from the agents.

THE SUGAR BURDEN.

Fruit Industry Seeks Conference Before Sugar Agreement Renewed.

AT the recent Australian Conference of Fruitgrowers in Hobart, a resolution was carried in favor of a conference between sugar and fruit interests, in order that some measure of relief might be obtained from what is believed to be a crushing burden.

A conference of fruitgrowers and fruit processors was held at Melbourne on July 25, Mr. A. W. Fairley (Shepparton Co-operative Fruit Preserving Co.), presiding. The following were represented personally or by proxy:—The Australian Conference of Fruitgrowers, the N.S.W. Fruitgrowers' Federation, South Australian Fruitgrowers and Market Gardeners' Association, Tasmanian Farmers, Stockowners and Orchardists' Association, Northern Victoria Fruitgrowers' Association, Southern Fruitgrowers' Association, Doncaster Fruitgrowers' Association, Chamber of Agriculture, and prominent fruitgrowers, the Australian Fruit Canners' Association, Commonwealth Jam, Preserving and Condiment Manufacturers' Association.

Resolutions were adopted, requesting the Prime Minister to defer any decision in reference to the renewal of the sugar agreement until an opportunity had been given for the fruit industry to submit its representations.

That the Prime Minister call a conference of fruitgrowers, canners, jam and condiment manufacturers and canegrowers as early as possible to discuss the sugar position.

The Sales Tax.

It was further resolved to enter an emphatic protest against the application of the sales tax on jams, canned fruits and condiments.

The pressure tester for measuring the progress for the ripening of fruit has proved of great value in recent Canadian cold storage tests.

Happiness has no tailor. It belongs to the soul; and a black coat or a blouse is of no matter to it.

* * *

Happiness belongs to those who are contented.—Aristotle.

RIDLEY & HOULDING
Covent Garden Market
LONDON
Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.
Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; and A. J. Walshe & Co., Hobart, Tasmania.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.
Correspondence Invited.
H. JONES & CO. LTD.,
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J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
Account Sales Posted Daily
APPLE EXPORTER
"Fruit Exchange,"
449-451 FLINDERS LANE
Branches { Western Market
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MELBOURNE
Reference—Satisfied Growers in all States

Australian Dried Fruit.

SULTANA DIPPING.

OBSERVATIONS OF SULTANA DIPPING during the 1930 season formed the subject of a paper at the recent Conference of the River Murray branches of the Agricultural Bureau at Berri, by Mr. F. R. Arndt, Horticultural Instructor. Several methods of dipping were described—the cold carbonate of potash dip, the Harry Johnson dip, the Grosse dip, the modified hot caustic soda dip, and the Ingerson dip. A summary of the conclusions are as follows:—

(a) That, with the exception of the "Cold Potash Dip," the low temperature dips of under 185 degrees F., generally give unsatisfactory results under cool or moist weather conditions, the fruit usually drying out very slowly, darkening in color while on the racks, and at times developing mould.

(b) That the warmer "Caustic Soda Dips," ranging in temperature from 190 degrees F. upwards, cause the fruit to dry out more rapidly, and render it less liable to develop mould during cool weather than if processed by lower temperature dips; also with rain-damaged fruit this class of dip produces a more evenly-colored dried article, although of a somewhat darker shade, than if such fruit were treated by the cooler dips.

(c) That the "Caustic Soda Dip" can often be improved by the addition of a couple of pounds of carbonate of potash and a little olive oil as an aid in brightening up the color of the fruit.

(d) That the use of the "Standard Cold Potash Dipping Solution" is of value as a spray in arresting the spread of mould on fruit on the drying racks during damp weather conditions.

THE SALES TAX.

Not to Apply for Dried Fruits.

The sales tax which has been imposed by the Federal Government on commodities generally is not to apply to dried fruits. The Federal Government made this decision on representations being made by the Australian Dried Fruits Association, and the Prime Minister made the announcement through Mr. P. G. Stewart, M.H.R.

AUSTRALIAN DRIED FRUITS.

Oversea Sales.

THE Commonwealth Dried Fruit Export Control Board, advises that sales of Australian Dried Fruit in Great Britain for the week ending July 17, totalled 664 tons, valued at £26,300.

Sales included 324 tons old season's Sultanas, averaging £34/19/- per ton, 85 tons new season's Sultanas at an average of £53/17/1, 255 tons Currants made £41/4/7 per ton.

Carryover stock old season fruit now stands at 4,324 tons, out of 50,155 tons shipped. Of the new season shipments 3,134 tons have been sold against shipments to date of 31,187 tons.

Market conditions are unaltered owing to trade depression throughout British markets.

Shipments this season include 10,896 tons Currants, 19,142 tons Sultanas, and 1,149 tons Lexias.

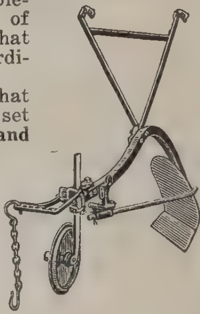
* * * * *

THE Commonwealth Dried Fruit Export Control Board are advised that 717 tons of Australian fruit were sold in British markets during the week ending July 24. The value of sales was £28,750.

348 tons Currants made an average price of £41/9/6 per ton, and 81 tons new season's Sultanas £50/17/4. Of old season's Sultanas, 276 tons made £35/7/5 per ton.

A Boon to Vignerons!

THE SUNVINE
Mouldboard Plough



This specially designed implement will cut out the strip of ground beneath the vines that is left unploughed by the ordinary plough.

The Beam is turned so that Mouldboard and Share are set out on nearside, and **the land is cultivated right up to the vine stems,** while horse and man walk clear.

Cuts furrow to any reasonable depth and 10 inches wide.

A spring-mounted Fender Rod prevents the share from striking vine stems or posts.

Over 400 Sunvine Ploughs were sold last season.

Price only £4 5 0
Less 5 per cent. for Cash.
Delivery on Rails Sunshine, Sydney, Adelaide, or Perth

H. V. McKAY PTY. LTD.
Sunshine Harvester Works, Sunshine

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

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GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE," 499 LITTLE COLLINS ST.
MELBOURNE.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle
Etc.

Shipments to date of new season's fruit, now total 31,861 tons, compared with 36,605 tons to the corresponding date last year. Quantities shipped include 11,027 tons Currants, against 10,344 tons last year, and deliveries of the Currant harvest are now approaching completion.

AUSTRALIAN DRIED FRUITS INDUSTRY.

Mr. P. G. Stewart, M.H.R., in the House of Representatives, recently directed attention to the parlous state of the Australian dried fruits industry.

A stabilisation scheme had been submitted to the Prime Minister, involving a grant of £200,000 bounty, spread over a period of three years, same not to be drawn upon unless prices fell below production costs. After enquiries the Government had declined to accept the scheme, and on June 3 a further deputation urged the Prime Minister to make at least £65,000 available, otherwise growers could not carry on operations for the production of the 1931 crop. The position was very serious. The average prices for fruits in the five-year periods before the war were:—Currants, per ton, £38; Sultanas, £39. Wages were then 7/- a day. Currants were now £26 per ton; Sultanas £23, and the wages 14/- per day. In addition, water charges had trebled.

The Minister for Markets (Mr. Parker Moloney) stated he would call a conference of all parties to thoroughly investigate the matter, and would explore every avenue for the marketing of dried fruits.

RED CLIFFS.

THERE was a large attendance at the annual meeting of the Red Cliffs' branch of the Australian Dried Fruits Association. The Chairman, Mr. G. H. Badger, said the position of the dried fruits industry was very serious. The Red Cliffs branch advocated a change in the system of election of the Board, to ensure a majority of growers, also the appointment of a business manager for the industry, but neither of these proposals have been adopted. The activities of the Red Cliffs branch included the obtaining of a standard formula for final account sales, valuable publicity methods here and abroad. The visit of Mr. Howie was appreciated.

The financial statement revealed assets valued at £680. A building fund was contemplated.

A new constitution for the branch was adopted.

DRIED FRUITS IN ENGLAND.

Comments on the sale of dried fruits in England are to hand in a report dated May 31, from Messrs. J. C. Houghton & Co., Liverpool.

Currants are stated to be slow and difficult to sell, though slightly better conditions developed. Sales were—Pyrgos 36/-, Zante 37/- to 38/-, Patras 39/- to 41/-, Vostizza 49/6 to 58/-. Australian new crop Currants railed from London to Liverpool realised 60/-. Shipments ex "Telamon" and "Runic" were excellent, prices 43/- to 52/-, a few choice 60/- to 63/-. The response from the country was disappointing, and later arrivals met a poor reception.

Sultanas.—Smyrnas, good quality, sold at 40/- to 43/-, fine 51/-, 52/-.

Australian.—The market firmed owing: (1) to reports of Smyrna crops being reduced from 65,000 to 50,000 tons, and (2) evidence of Continental demand; (3) the estimated lesser quantity from Australia. A shade of disappointment was expressed with the quality and appearance of the new fruit so far seen; buyers turned to the old crop fruit, which sold at 34/- to 36/-, better grades 38/- to 43/-. With new fruit the progress was negligible.

DRIED FRUIT PACKING CHARGES.

The Renmark Fruitgrowers' Co-operated Ltd., advise their packing charges have been substantially reduced and are as follows (inclusive of all costs delivered on truck Renmark station): vine fruits £5/10/- per ton, tree fruits £7/10/- per ton.

SUGAR AGREEMENT CONDEMNED.

Mr. J. A. Gaasch, a well-known fruitgrower of Harcourt, Vic., recently expressed himself very vigorously to a "Fruit World" representative on the subject of the sugar agreement and embargo.

A close and organised monopoly has Australia in its toils. Political influence is used to bolster up the uneconomic sugar industry. Mr. Gaasch blames "Billy" Hughes for making the agreement, thus introducing a system of bounty-fed industries which have assisted to put Australia in the present unsatisfactory financial position.

Margetson & Co. Ltd.
Fruit Importers and Salesmen
30 James Street and James Street Warehouses,
11 Neal Street,
COVENT GARDEN, LONDON, W.C.,
and at Jamaica House,
9 and 10 Botolph Lane, London, E.C., and
56-58 Stanley Street, Liverpool.
Sales by PRIVATE TREATY.
Prompt Returns and Settlements.
Tel Add.:—FRUTERO, LONDON.
MARGETSON, LIVERPOOL.
Head Office:
Covent Garden Market, London, W.C.
Bankers:
Lloyd's Bank Ltd., Law Courts Branch, Strand, London, W.C.
Shipping Nos.: 431 and 432.

DOMESTIC ECONOMY LECTURES.

Public Lectures Arranged by Emily McPherson College.

An excellent series of public lectures has been arranged by the Emily McPherson College of Domestic Economy, corner Russell and Victoria streets, Melbourne.

Four appreciated lectures were given in July. The August fixtures are as follows:—

Wednesday, August 6.—"Do We Progress? Home Life in Ancient Greece and Egypt," Miss J. S. Webb, M.A., History Department, Melbourne University (illustrated lecture). Wednesday, August 13.—"Household Management—Hints on Planning of Time and Money Expenditure," Miss R. S. Chisholm, M.A., Principal. Wednesday, August 20.—Lecture Demonstration on: (a) children's garments, Miss B. King, of the College staff; (b) animal toys, Miss I. Harding-French, of the College staff. The lectures are free, and members of the general public are cordially invited.

STILL CHEAPER !!!

SULPHATE OF AMMONIA

A reduction of **£1/11/6** per ton in the price of
SULPHATE OF AMMONIA
will take effect as from the 1st July.

The new price will be **£12/12/0** per ton free on rails, less 2½% for cash, and at this price supplies of Sulphate of Ammonia can be obtained, as usual, from all fertiliser manufacturers or their agents or direct from the Metropolitan Gas Co., 196 Flinders Street, Melbourne.

Sulphate of Ammonia literature, and advice regarding the use of fertilisers direct from:—

NITROGEN FERTILISERS PTY. LTD.
360 Collins Street, Melbourne.

New South Wales.

N.S.W. EXPERIMENTAL FRUIT SHIPMENT.

Safe Arrival at Hull.

THE SAFE ARRIVAL at Hull is reported of the special consignment of New South Wales fruit per s.s. "Port Hunter," in charge of Mr. H. Broadfoot, N.S.W. Department of Agriculture.

There were over 34,000 cases of Apples and Pears, there being a predominance of Granny Smith Apples. Other varieties included Jonathan, London Pippin, King David, Cleo., Dunn's and Romes.

Mr. Broadfoot reported the Apples opened up in perfect condition, no waste, bitter pit, or breakdown. The quality was unsurpassed. The complete lower hold was loaded with pre-cooled fruit and sealed. The shipment was battened down in Sydney and remained sealed until unloaded in Hull.

Mr. Broadfoot took temperatures throughout the voyage and reports there were hardly any fluctuations. The temperature was brought down to the required level in seven days.

The shipment was organised by the Batlow Co-operative Cool Stores' Association, co-operating with the Department of Agriculture and the London and North-Eastern Railway Company (representing the Port of Hull). Fruit came from Batlow, Orange, Young, Bathurst, Uralla, Leeton (Murrumbidgee irrigation areas), and Kentucky.

All who took part in this enterprise are to be congratulated on its success. This will prove of great stimulus to the export of fruit from New South Wales.

"PLAIN" GRADE APPLES.

Export Prohibited from January Next.

Strong Protests from N.S.W.

THE DECISION of the Commonwealth Government to prohibit the export of plain grade as from January 31 next, is being strongly contested in New South Wales.

It is feared that the result of the regulation will be the glutting of the Sydney market with "plain" grade fruit, to the detriment of local producers.

FRUIT TREE NURSERY REPORTS.

Messrs. L. P. Rosen & Son, fruit tree nurserymen, of Carlingford, N.S.W., advise as follows under date July 22:—

Up to the present, owing to the general depression the demand for fruit trees has not been quite up to the average, although we find that the bookings in citrus have been good, particularly Valencias and Sweet-rind Lemons. In Apples, Granny Smith, Delicious and Democrat seem to be the lines that are being largely planted, and in the case of Cherries, St. Margaret Cherries have been largely planted in the Orange district, due to the cutting out of the Grape vines which have not been a success of recent years there.

With Peaches and Plums, the lines mostly asked for have been of the early varieties, but even so, we will still have most kinds available. We have experienced one of the wettest winters we have had for many years. This has made it very difficult to attempt the execution of orders and preparing the land for the next crop.

The demand for Pears, Prunes and Persimmons has been very very light.

On the whole, the demand for trees, considering the depression, has been fair.

Messrs. Swane Bros., Enterprise Nurseries, Ermington, report on July 22:—Citrus trees of all kinds have again sold well; Lemons and Late Valencia Oranges being much sought after. We are booked up in all lines—some 60,000 for the season.

Deciduous trees have been slow of sale, especially Jap. Plums.

Our new Peach (Taylor's Anniversary Red), will, we think, have a ready sale next season, this being its first season in the market it has not yet become properly known.

The erection of a cool store at Armidale, N.S.W., is under discussion.

The Murrumbidgee Irrigation Areas have a very large crop of Oranges this season as follows:—Griffith, 170,000 bushels; Leeton, 40,000; Yenda, 40,000; making a total of 250,000 bushels. The railway refreshment rooms are co-operating in distribution.

TREES
Plant
NOW

Goodman's Reliable Trees

Get your Fruit Trees in NOW to give them a good start. Best results guaranteed.

Goodman's offer the best Trees in all varieties—strong, healthy, well-grown stocks that will prove prolific bearers in all climates.

Apples, Apricots, Almonds, Cherries, Peaches, Pears, Plums, Nectarines, Prunes, Quinces, Persimmons, Passion Fruit, Grape Vines, Currants, Gooseberries, Raspberries, Strawberries, etc.

WRITE FOR NEW FREE CATALOGUE,
giving full details of all varieties.

C. J. GOODMAN
Picnic Point Nurseries
Bairnsdale, Vic.

(W. McF.)

South Australian Fruit Marketing Association.

Important Annual Meeting.

THE SECOND ANNUAL MEETING of the South Australian Fruit Marketing Association was held at Adelaide on July 25, Mr. H. J. Bishop presiding.

The Minister for Agriculture congratulated members on the good results of their voluntary organisation. Major Owens, Chairman of the Overseas Shipping Representatives' Association, stated that the combined efforts of the two Associations had resulted in the satisfactory handling of the export trade. The Australian export trade was difficult from the shipowners' viewpoint, because it was seasonal and variable.

In reviewing the season, the President said the standardising of the export cases was very important. The standard ("Canadian") was adopted, with practically all Apples exported: many had attractive colored labels. The services of Mr. Krone, Victorian Fruit Packing Expert, were warmly appreciated. The Association had closely co-operated with the Chief Inspector, Mr. Quinn, to improve the grading and packing. Rough handling was still prevalent, and drastic measures were necessary to improve this.

"YARRA"

QUICK BREAKING

White Oil Emulsion

Easy to mix, Effective in result,
Economical in quantity.
USE NOW
ON CITRUS TREES.

PARSONS & JAQUES
Manufacturing Chemists,
6 Patterson St., 155 Yarra St.,
Abbotsford, Vic.

Tasmanian Agents—
N. L. HOPKINS, HOBART.

During the 1930 season, 635,000 cases of Apples, and 19,500 ½ packages of Pears were sent overseas. The first estimate was for 400,000 cases. Subsequently space for 700,000 cases was requested. Ships had to be chartered and unconditional guarantees of 3/6 per case on 604,000 cases were given. It was a time of anxiety because of the dryness of the season. Without these guarantees, and the S.A.F.M.A. speaking with one voice, the crop could not have been lifted.

Continuing, Mr. Bishop said there had been some criticism re destinations, it being alleged that too large a quantity had been sent to the Continent. During the early part of the season, this was a splendid market, and possibly too little was sent there then. Critics, however, should know of the difficulties in getting the fruit lifted.

The shippers' control did everything possible to arrange sailing dates precisely as desired, but this was not always possible, especially with steamers sent under charter. The s.s. "Natia" was delayed ten days before sailing, went via the Cape, and clashed with shipments

A Boon to Parents

100% Effective Cure for

WORMS
in CHILDREN

The "Never Fail" Worm Cure
is a blessing to Humanity.

Nature's Own Herbal Remedy—No harmful drugs.

THOUSANDS of mothers are driven almost to desperation by the ravages of worms in their children, and they have often despaired of obtaining a permanent remedy.

The symptoms are usually well known—offensive breath—picking at the nose—puffiness of the face—disturbed sleep—peevishness, and general restlessness—abnormal or depraved appetite—sensation of gnawing in the abdomen—grinding of the teeth in sleep.

YET NATURE HAS PROVIDED A REMEDY

The discovery was simple—

A well-known business man whose children were suffering from worms was induced to try a herbal remedy drawn from the forests of Northern Europe.

The effect was magical. The worms were excreted: the children regained their rosy cheeks and happy playfulness. Sweet sleep was restored.

As Australian vegetation produces the same remedy, it was tried with others, and proved 100% effective.

Grateful users write:—"We are grateful beyond expression for 'Never Fail.' The first dose cured our girlie, aged 8."

"We are telling all our friends about 'Never Fail': it cured our two children of worms."

Send for Bottle To-day. Price 3/-, Post Free.

One Bottle Contains 30 Doses.

Prepared by the

Laurel Laboratories
(Regd.),
Manufacturing Chemists
Box 1944, G.P.O., Melbourne

via Suez. The delay cost growers many thousands of pounds sterling. He thought all early shipments should go via Suez. The wool sales largely determined the shipping programme.

As the 1931 season would probably be light, it was thought there would not be nearly sufficient fruit for export to fill half the ships normally on the berth. Growers should strive to obtain even crops yearly.

Pear Shipments.—Difficulty had been experienced in shipping Pears, as the space had been booked by Victoria. However, space was secured on s.s. "Hurunui," sailing March 29 for a minimum of 20,000 half cases—B. Bosc, Nelis, Triumph, Glou Morceau, Smaller and more frequent shipments were desirable.

Australian Export Association Suggested.

Looking ahead, concluded the speaker, what of the future of our industry. Can it be made profitable? I feel certain it can, but the future is calling for greater efforts, and I particularly ask the younger members, especially the young grower members, not to be apathetic. **Can you vision the time when Australia and Tasmania have similar Associations acting in unity under one controlling advisory board.** This may make possible the apportioning of the shipping space equitably throughout the Commonwealth, and not as at present, leave Adelaide so very often without a fair proportion. It should be possible to logically control the distribution to various centres, and ensure as near as practicable a continuity and even supply on the European markets, rather than periodical gluts and shortages. This and many other necessary reforms should be possible.

* * *

Mr. H. J. Bishop was re-elected Chairman.

The retiring members of the Committee were reappointed: Messrs. G. A. W. Pope, D. Blyth, G. Selth, A. V. Pitt, H. N. Wicks, F. B. James, M. G. Basey, J. B. Randell, G. S. Hammat and R. O. Knappstein, and the members of the Auxiliary Committee: Messrs. A. O. Petersen, E. W. Dearman, G. Mack, were re-appointed, and in adidtion, Messrs, R. H. Charlick, D. W. Hannaford, A. Filsell and G. L. Wishart. All existing district delegates were unanimously re-appointed.

Co-operation With Agricultural Department.

Mr. G. Quinn, Chief Horticultural Instructor, congratulated the Association on its successful year, and said the relations between the Association and the Department had been most happy, and undoubtedly beneficial to the industry generally. There had been a great improvement in the packing—the wired softwood cases were superior to the old hardwood case.

South Australian Export Competition.

Mr. F. W. Tippett, of Cudlee Creek, won the Silver Cup presented by Mr. H. J. Bishop for best quality and best pack of export Apples last season.

The Chief Horticultural Instructor, Mr. George Quinn, who was judge, awarded Mr. Tippett 80 points. Mr. C. W. R. James, Balhannah (74), and Dearman Brothers, of Tweedvale (63), 2nd and 3rd respectively, received prizes of £4 and £2, presented by Mr. G. H. Colombie. Mr. Tippett received hearty congratulations on his success.

TOMATO-GROWING IN VICTORIA.

AN EXPORT TRADE in Tomato products with near Eastern countries is being developed. It is to be hoped that there will be a substantial export trade in the coming season, and that manufacturers will provide for the same by processing ample stocks of Tomato products. In the meantime, because of the financial depression, the plantings of Tomatoes around Bendigo are less that last year.

Over 500,000 cases of Tomatoes were supplied to factories in Bendigo.

AUSTRALIAN ORANGES IN CANADA.

Eight hundred cases of Australian Oranges were landed in Vancouver on July 18 by the s.s. "Aorangi": the fruit was in prime condition, and prices attractive.

Previously the bulk of the supplies came from California; now, in addition to Australia, other countries are sending supplies, including Japan and Brazil.

EUCALYPTS FOR FROST AREAS.

Mr. Geo. A. Green, Secretary, New Zealand Horticultural Trades' Association, writes:—

"I noted your article re 'Eucalypts on the U.S. Pacific 'Coast,' and that Mr. Rae, of the Melbourne Botanic Gardens, has sent seeds of E. coriacea and E. Risdoni. May I suggest another variety hardier than both, i.e., E. Gunnii. In South New Zealand it will stand 20 or more degrees of frost. It transplants readily, and is a useful tree. It is often under snow."

L. P. Rosen & Son, Fernhill Nurseries

Are now booking orders for all kinds of Fruit Trees, including Citrus, of which 100,000 are available, and can supply some 10,000 Valencias, grown from buds supplied by the N.S.W. Bud Selection Society. Prices and quotations on application.

Catalogues Post Free

Specialties—FRUIT TREES, ROSE PLANTS, and KUNDE SECATEURS and KNIVES.

Pennant Hills Road, CARLINGFORD Late of Epping. **N.S.W.**

A NEW SPRAY and a NEW SPREADER

Crystol-85

The Australian-made White Oil Emulsion,
Containing 85 per cent. by weight
Pure Refined Paraffin Oil.

CRYSTOL-85.
For Use on Citrus and Deciduous Fruit Trees and Plants in Full Leaf, With Perfect Safety.

CRYSTOL-85.
Most Effective in Killing **Red Scale** at Any Season.
Brown Olive Scale in January and February.
Also White Wax Scale and White Louse.
Wipes out Red Spider.

CRYSTOL-85.
Smothers Codlin Moth Eggs.
And is Valuable in Conjunction with the Usual Arsenate of Lead Programme.
Is Cheaper than some other oil emulsions, and is **More Effective,** as it contains more oil, but at the same time is Absolutely Safe to Use.

CRYSTOL-85.
Of Tremendous Benefit in Combating **Peach and Cherry Aphis,** etc., in Combination with Nicotine Sulphate (Black-Leaf 40).

MANUFACTURED IN AUSTRALIA.

FLUXIT

The New Spreader
Instantly Soluble.

WHAT makes every spray a more efficient spray by transforming it into a colloidal solution?—**FLUXIT.**

WHAT makes a perfect spray that wets thoroughly, spreads uniformly, and clings to the surface?—**FLUXIT.**

WHAT makes the standard amounts of Arsenate used in sprays much more efficient to kill?—**FLUXIT.**

WHAT gives better results with one half pound than one pound of obsolete spreaders did before in Arsenate of Lead sprays?—**FLUXIT.**

WHAT gives Nicotine, Lime Sulphur, and Bordeaux sprays a thicker film, that wets better, stays longer, and makes the Nicotine Sulphate more efficient to kill?—**FLUXIT.**

WHAT makes a much more effective spray of White Oil-Arsenate of Lead combination, by absolutely preventing curdling?—**FLUXIT.**

There is No Substitute for FLUXIT.

Manufactured by Colloidal Products Corporation, San Francisco, U.S.A.

"APPLIM" Brand AGRICULTURAL LIME

BURNT and GROUND. 95% CALCIUM CARBONATE.
PURER, FINER, CHEAPER.
LOWER FREIGHT (railed from Footscray).

Australian Agents:

Lawford's Fruit Exchange Pty. Ltd.

DONCASTER, VICTORIA

Growers! Write for Full Information. Agents Wanted where not represented.

Sugar Enquiry.

Public Protests Effective.

No Renewal of Sugar Agreement Until Public Investigation.

THE SUGAR INDUSTRY is to be the subject of a public investigation before the Federal Government will consider a renewal of the Sugar Agreement.

This announcement was made by the Prime Minister, Mr. Scullin, on July 30.

The Committee will comprise not more than seven persons—the Director of Development, Mr. J. Gunn (Chairman), the accountant of the Customs Department, Mr. A. R. Townsend, a representative (a) sugar employers, (b) sugar employees, (c) manufacturers, (d) domestic consumers, (e) fruitgrowers.

Mr. Scullin said the Government would receive nominations from bodies claiming to represent consumers and fruitgrowers.

The terms of reference include—Efficiency in field and laboratory; land values; cost of production and distribution; feasible economy; effect of sugar prices on manufacturing industries, including fruitgrowing and processing; alien penetration; overproduction and neutralisation of sugar by-products.

Each section is to pay the cost of its own representative.

Announcement *re* Price of Nitrophoska

Messrs. Henry H. York & Co. Pty. Ltd., regret to advise that on and after 1st of August an amount of 15/6 per ton must be added to the price of "Nitrophoska" in order to cover primage and the duty on bags.

GLASGOW AS A MARKET.

FOR the recent shipment of Apples to Glasgow, in which a prominent part was taken by the Harcourt Fruit Supply Co., Harcourt, good prices were received, thus directing attention to the importance of Glasgow as a market for Australian fruit.

Appreciation has been expressed in Harcourt for the visit of Mr. Harold M. Ford, who, in his tour of Australia and New Zealand, brought before growers the value of Glasgow as a market.

The Clyde Navigation Company, Glasgow, have now established a Commercial Managers' Department for the development of the trade with the port, outwards and inwards—Mr. H. M. Ford has been placed in charge. Satisfaction has been expressed in Australia and New Zealand on this appointment, believing it will lead to important developments in the export of fruit.

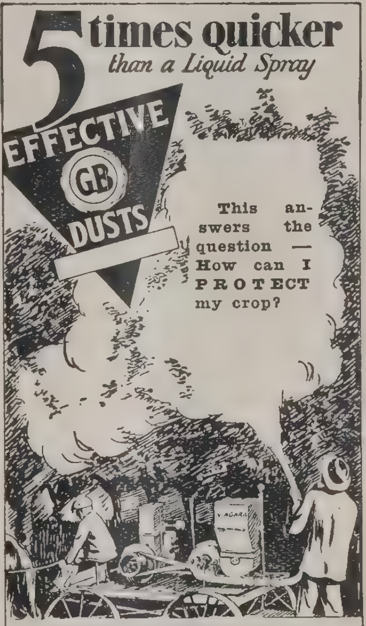
THE USE OF ETHYLENE GAS.

Ethylene gas is largely used in America to improve the color of mature citrus, also for improving Celery, Tomatoes and the like. The use of ethylene gas for coloring immature citrus is admitted to be wholly indefensible. By treating mature Oranges, particularly the Late Valencias, an even golden color is produced.

Price of Nitrophoska.—In order to cover primage and the duty on bags, we are advised by Messrs. Henry H. York & Co. Pty. Ltd., that on and after August 1, an amount of 15/6 per ton must be added to the price of Nitrophoska.

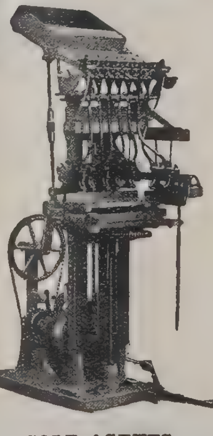
A Boon to Parents.—At the request of some well-known business men, we have accepted an advertisement from the Laurel Laboratories (Regd.), manufacturing chemists, who have perfected a herbal remedy for ridding children of worms. The remedy is purely herbal, from Australian vegetation. We have perused copies of the testimonials from users, some of whom are known to us. Further details of this "Never Fail" worm cure are obtainable from the Laurel Laboratories (Regd.), manufacturing chemists, Box 1944, G.P.O., Melbourne.

DUSTING



GIBBS, BRIGHT & CO.,
Adelaide.

BOX MAKING
MILLERS' BRITISH-MADE
NAILING MACHINES.



SOLE AGENTS,
GIBBS, BRIGHT & Co.
27 Grenfell Street, ADELAIDE

Canned Fruits.

APRICOTS FOR CANNING.

Moorpark Variety Deemed Unsuitable.

THE Kyabram Fruit Preserving Company has decided to discontinue the canning of Moorpark Apricots, after three years, and the growers are advised to work their trees over to other varieties. A reason for the unsuitability of the Moorpark variety is stated to be its greenness at the stalk, which produces an uneven pack. If the fruit is left to dry to get rid of the greenness, the Apricots go mushy.

Continual complaints have come from the United Kingdom on the score of the greenness of the canned Moorpark Apricot. Tilton and Trevatt varieties gave far better results. It is considered that the Moorpark is really of a better flavor to the Tilton or Trevatt, but its appearance is against it.

As the export markets desired the golden color in the canned Apricot, these markets must be supplied with the goods as they want them. Consequently the growers have been notified that no more Moorparks will be accepted for canning after three years.

CANNING FRUITS.

CALIFORNIA expects to pack 375,000 tons of Peaches this season: there is a much heavier crop, and it is thought that 120,000 tons will rot. The price paid by canners is 27 dollars per short ton, of which seven dollars will be placed in an equalisation fund to enable growers to receive 20 dollars for the whole of the crop—picked or not picked.

* * *

The low price of California canned fruits has already brought down the price of the Australian pack in England.

The problem of the distribution of Australian canned fruits, both in Australia and abroad, is very acute.

ARDMONA FRUITGROWERS' ASSOCIATION.

At the annual meeting of Ardmona Fruitgrowers' Association, office-bearers were elected:—President, Mr. W. Young; Vice-Presidents, Messrs. J. Pearson and H. E. Pickworth; Secretary and Treasurer, Mr. S. Cornish. Delegates to Northern Fruitgrowers' Association, Messrs. J. D. Simson, P. A. Pyke, and J. Pearson.

UNITED BERRY GROWERS' ASSOCIATION.

At the recent annual meeting of the United Berry Growers' Association, held at Silvan, Mr. R. A. Routley, presided. It was decided that the Secretary be asked to canvass certain districts to increase the sale of berry fruits. Office-bearers were elected:—President, Mr. L. Bunt; Vice-president, Mr. T. Bowman; Secretary, Mr. J. M. Mitchell, Wandin; Treasurer, Mr. J. Bowman.

* * * * *

Selling is now the most difficult part of the fruit canning business in Australia.

One Application of

From 3 to 5 lbs. per Tree of

NITROPHOSKA

Provides the equivalent of from 3—5 lbs. of a 16 per cent. Nitrogen fertiliser. Also enough Phosphate and Potash to balance this and other periodical dressings of Nitrogen.

NOTE.—There **MAY** be enough Potash made available in the soil to balance the other plant foods, but there **MAY NOT!**

It will only cost you from 1½ to 3 pence per tree to **MAKE SURE.**

NITROPHOSKA **saves** FREIGHT
CARTAGE
HANDLING
APPLICATION COSTS

NITROPHOSKA **ensures** BALANCED FEEDING

These are the reasons why it is now the Standard Spring Dressing for Fruitgrowers in Victoria.

NITROPHOSKA is obtainable through your Packing Shed or from Agents.

LIMITED SUPPLIES ONLY ——————— **ORDER NOW.**

Literature on application from:—

Henry H. York & Co. Pty. Ltd., 573-585 Lonsdale St., Melb.

(Late Dyes & Chemicals (Aust.) Ltd.)
Sole Distributors. Write for Pamphlet.

"To Choose the Best is Wisdom"

"LIGHTNING" EQUIPMENT

For the Fruitgrowing Industry is

Universally Used—WHY?

BECAUSE—it is Designed and Manufactured by a Firm with a Lifetime Experience of Fruitgrowing Conditions.

When You Buy a "LIGHTNING" you Buy for all Time.

Please Note Our New Address:

The "Lightning" Fruit Grader Co.

517 Albion Street, West Brunswick, N. 12. Melbourne

Flowers and Vegetables.

Notes for August.

THE KINDS OF SEEDS that can be sown in this month depend largely on climate and situation. In some districts very few frosts are looked for in August, while in others they extend into September.

Such plants as Melons, early Cucumbers and Tomatoes will not stand the slightest frost, and require considerable warmth in the ground to bring them on. Usually these can be sown towards the end of the month if they are carefully protected from cold winds and are planted in a well-drained, warm situation. Main sowings of all the hardier vegetables may be put in as mentioned below, including Potatoes and Jerusalem Artichokes.

Many flower seeds, as listed below, may also be sown in the open ground if plants are not available from autumn sowings. Several varieties of flowering plants mentioned hereunder can be planted this month, also ornamental shrubs and trees.

This is a good time to overhaul the glasshouse and bush-house. Most plants want potting each year, and this is the best month to do it.

Lawns can also be top-dressed during August or September.

What to Plant in August.

Vegetable Seeds.—Artichokes, Asparagus, Beetroot, Carrot, Cape Gooseberry, Celery, Chokos, Cress, Cucumber, Herbs, Leek, Lettuce, Melons, Mustard, Parsley, Parsnip, Peanuts, Peas, Potatoes, Radish, Rhubarb, Squash, Tomatoes, Turnips, herb plants and roots.

Flower Seeds.—Acroclinium (Everlasting), Ageratum, Alonsoa, Ammobium (Everlasting), Antirrhinum (Snapdragon), Arctotis, Asters, Braychycome (Swan River Daisy), Calendula, Calliopsis, Candytuft, Carnations, Chrysanthemum, Delphinium, Dianthus, Didiscus (Blue Lace Flower), Dimorphotheca (African Golden Daisy), Gaillardia, Geum, Globe Amaranth (Gomphrena), Gypsophila, Helichrysum (Straw Flower), Hunnemannia (Mexican Poppy), Larkspur, Lupins, Marigold, Mignonette, Pea (Everlasting), Phlox, Poppies (cold districts only), Scabious (Pin Cushion), Statice (Sea Lavender), Stocks (cold climates only), Torenia, Verbena, Wallflower (annual).

Bulbs. — Agapanthus, Anemone japonica, Begonia (tuberous), Canna, Gladioli, Gloxinia, Hippeastrum (Amaryllis), Lilium gloriosa (The Climbing Lily), Tigrida (Tiger Flower), Tuberose, Valotta (Scarborough Lily).

Ornamental trees and shrubs, all fruit trees, Strawberry plants.

Plants.—Pelargoniums (Geraniums), Pentstemons.

Lawn grass.

Richmond.—At the June meeting of the Richmond Horticultural Society it was decided to launch a home garden competition for flowers and vegetables, the gardens to be judged four times a year—some time during the first fortnight in the months of October, January, April and July. The following points are to be taken into consideration when judging:—(1) Lay-out; (2) neatness; (3) culture; (4), general effect.

It was decided to hold the Society's Spring Show on October 16.

How Are Your Fowls Laying?

EGG RESULTS

Are Eggs Plentiful?

If not—

Blame Yourself!

Are your birds giving you satisfactory egg-production? Do they lay regularly and steadily through the year? If they do not, it is no use blaming them, for only in rare instances of sickness is it really their fault. Blame yourself, for without a doubt you are responsible. You might think you are doing your best by them by feeding them well. Mr. Bonner, as he relates in the letter published below, thought so, too, but he found that no matter how well he fed them, they sometimes would not lay the whole winter through. Not until he started putting that dash of Karswood in the mash did he obtain satisfactory results the whole year round.

In Australia alone, thousands of poultry keepers have found the same thing, and the reason is perfectly simple. Karswood contains dried and ground insects and other suitable tonic ingredients which stimulate the hen in a healthy way. But it does not force. It cannot, for it contains no forcing ingredients.

"Never without eggs"

Dear Sirs,

I have used your poultry spice during the winter months and moulting season for some years. Since using same I have never been without eggs, whereas before no matter how well I fed them they perhaps wouldn't lay the whole winter. This year I sold all my hens except nine black orpingtons and five wyandottes, and right through I got from 6 to 11 eggs a day. I might also mention that I am not feeding by the laying schedule. I just give them pollard in the morning with the spice and whatever grain is grown on the farm for the night meal.

Yours faithfully,
(*Sgd.*) *M. BONNER, Olinda,*
10-9-29. *via Tylestone.*

"Doubled the Egg Yield'

I have much pleasure in expressing my appreciation of your wonderful Karswood Spice. Although only a backyarder with 12 pure bred B.O. I have found that by using Karswood Spice I have doubled the egg yield, whilst my fowls are healthy and full of life. I should also like to state that during the moult it has acted like a charm, quickly helping the fowls back to normal health. Should this statement be of any use to you, you are welcome to use it as you think fit. I might mention that I have 2 batches of young pullets which I hope to give your spice a thorough try out on and hope to let you know results later on.

(*Sgd.*) *J. W. QUINLIVAN*
4/6/29. *55 Bowden St. Ryde.*

"Hawkesbury College Averages Equalled"

I keep only White Leghorns, the number varies of course from time to time, at present it is about 110. I have used Karswood regularly for so long that I have no data as to the number of eggs laid before using, only I know that my monthly totals of eggs laid gives an average very little if any lower than the Hawkesbury College averages; vitality and hatchability of the eggs from breeding pen has been remarkably good, largely due I believe to the use of Karswood.

(*Sgd.*) *Mrs. E. SAYCE, 74 Cornish St.,*
3/6/29. *Broken Hill, N.S.W.*

"Karswood Starts Them Laying Again"

I have been using Karswood off and on for the past three years and found it most efficacious with hens when they go off laying. At times I do not give it to them but as soon as they show signs of falling off, "Karswood" quickly starts them again. You can make any use of this you like as it is my experience, anyway.

(*Sgd.*) *JAS. CLYNE, Ulva,*
Torrens Creek.

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half-a-dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/- packet supplies 20 hens for 16 days;
2/- packet supplies 20 hens for 32 days;
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½ lb. packet, 1/-; 1 lb. packet, 2/-; 7 lb. tin, 13/-; 14 lb. tin, 25/-; 28 lb. tin, 48/-.

5.M.30

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

Poultry Notes for August.

GROWING stock will develop better if placed on clean and free range after they have been taught to roost, says the N.S.W. Poultry Expert. There is the risk of disease and worm infestation if the birds are allowed on contaminated land.

Any of last season's stock that still remain in the yards should now be removed in order to give the enclosures at least three months' spell before the young stock are transferred to them.

Answers to Correspondence.

A Living From Poultry.

Questions:

"Hopeful" (Box Hill) writes:—

1. Is it possible for a man (single-handed) to earn a living from poultry to keep a wife and four children, from sale of eggs only, not selling day-old chicks or fertile eggs?

2. How many head would be needed?

3. What strain would be best?

Answers:

1. This will depend on the man, the capital and equipment at his disposal, and the quality of the stock. It is very doubtful if a man, without experience in the breeding of poultry, could acquire a poultry farm and make a sufficient living to keep a wife and four children, unless he had previous experience with poultry. Most of the successful poultry farms to-day have sprung from small beginnings, and if you have not had the experience of breeding poultry, it would be wiser to commence with them as a sideline and breed up gradually until you gain experience and are in a position to discard other means of livelihood. By that time you will probably have acquired sufficient stock and knowledge to enable you to make a living for yourself and family from the poultry alone.

2. A successful poultryman should be able to clear approximately £1 per week from every 100 birds. As a full-time occupation for one man, from 500 to 600 birds would be required.

3. A strain of birds that is known to be capable of producing a good flock average of eggs that will comply with the 2 oz. weight standard would be required. Many of the commercial farms to-day are stocking such strains in White Leghorns and Black Orpingtons, while other breeds, such as Light Sussex, Rhode Island Reds, Black Leghorns, and Anconas are in a more limited way proving their worth as commercial breeds in Victoria to-day. I would advise you to consult a reliable breeder before making any purchase of stock or eggs.

Abdomenal Dropsy.

Question:

"In Doubt" (Castlemaine) writes:—

Can you give me information re my fowls, and what treatment they should receive?

White Leghorns: One fowl—2nd year—is dopey, not eating, and very white all about the head. Also white rooster, a short time back was very sparky, and to me he seemed to go off color all at once; droopy, tail hanging, and legs wide apart, very hard and swollen between the legs; comb, etc., red.

One hen died about Christmas with symptoms of white rooster, and the hard swollen part between the legs proved a bag of water.

The fowls are fed with morning mash of equal parts bran, pollard, and crushed barley; sometimes some boiled barley; midday and night feeding with wheat. They get all the scraps from the table, are on an ordinary farm, and let out for a run every afternoon.

Answer:

Your second-year bird is apparently suffering from poverty of the blood, which has brought about an anaemic condition. Sometimes this condition is a result of a diseased liver. Such a condition may develop into abdomenal dropsy, which seems to be the trouble affecting your other birds. This disease, however, usually occurs only in individual cases, and it is rarely profitable to treat it. Destroy the affected birds, and dose the flock with Epsom salts—one ounce to every twenty adult birds. Mix the salts with the liquid of the wet mash to ensure even distribution. Your flock needs toning up. If any more cases develop send an affected live bird to the Director, Veterinary Research Institute, Parkville, Victoria, for examination.

I suggest adding Minerol to the mash. Feed succulent greens at midday and wheat at night only. Tone up the flock by adding Merval to the drinking water once a week.

SMALL EGGS.

Size of egg is inherited, and only by good feeding can we get the size of egg, which the pullet has inherited. Factors which militate against this are too stimulating a diet during the growing period, underfeeding (very common, unfortunately) during this period, overcrowding, or anything which hinders the healthy development of the pullet; underfeeding while the birds are in actual production. Much of this underfeeding is unintentional, and we repeat again, that a flock of 100 birds require 20 lineal feet of feeding space. On many farms the hopper accommodation is considerably less than this.

In cold weather, size of egg is affected because the pullets do not drink sufficient water, and consequently there is a smaller consumption of food. The difficulty may be easily overcome, and either of these means will increase production and size of eggs, if (1) the chill is taken off the water, (2) the birds are given 6 lbs. of dry mash per 100, moistened with water at mid-day, (3) they are given 6 lbs. of sprouted oats at mid-day per 100 birds.—("Eggs.")

Old Hen: "I will give you good advice."
Young Hen: "What is it?"
Old Hen: "An egg a day keeps the axe away."

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,

Advertising in this Journal.

NEW SOUTH WALES.

Sydney:
Chilton, F., City Fruit Markets.
Louey Pang & Samuel Wong Ltd., Thomas St., Haymarket.

VICTORIA.

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Cave, F., & Co., Melbourne.
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Davis, J., Pty. Ltd., Western Market.
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Renouf, R., Western Market.
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Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

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Cooksley & Co., Fruit Exchange.
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TASMANIA.

Hobart:
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Peacock, W. D., & Co., Fruit Exporters, and at London.
Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

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M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
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Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
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White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.
Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.
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Scheiber, E., Paris.

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Hamburg:
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Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

Market Reports.

Great Britain.

London (Covent Garden), 18/6/30.—The "Fruit, Flower and Vegetable Trades Journal" reports:—The Strawberry season has opened, but prices are disappointing. Cherries (English and Continental) and Gooseberries, etc., also on market. Pears realising good money. Spanish and Californian Plums selling freely. Spanish Apricots plentiful and cheap. Apples, Vic., G.S., 13/3; Jon., 8/9 to 11/-; Tas. S.T.P., 9/6 to 12/-; S. Aust. Dunn's, 11/6 to 12/-; Oranges, Valencia 240's, 13/- to 15/-, 360's 15/-.

Spitalfields.—N.Z. Dunn's, 11/- to 13/-; Jon., 11/- to 12/-; Aust. and Tas. Cleo., 12/6 to 13/-; Alf., 13/- to 14/-; Pears, Aust. B.B., 13/- to 16/-; Jos., 14/- to 16/- per box; S. African Comice, 7/- to 8/- per tray; Grapefruit, Florida and Porto Rico, 34/- to 37/-; Pineapples, St. Michael, 2/- to 4/- each.

Birmingham (June 18).—Aust. Cleo., 14/- to 15/-; C.O.P., 18/- to 21/-; N.Z. Cleo., 14/- to 15/-; Del., 15/- to 16/-; Tas. Adam's Pearmain, 12/- to 14/-; Aust. Pears, 15/- to 20/- per box.

Bristol (June 18).—N.Z. Sturmer, 13/- to 15/-; Aust. Jon., 14/- to 15/-; Cleo., 15/- to 16/-; Dunn's, 15/- to 16/-; Cal. Grapefruit, 32/6 to 37/-; Lemons, Messina, 300's 12/- to 18/-; Grapes, English Hambro, 1/6 to 4/- per lb.; Tas. Pears, Jos., 12/- to 16/-; B.B., 10/- to 12/- per half-case.

Edinburgh (June 18).—Aust. Dunn's and Jons., 11/6 to 12/-; N.Z. Del., 11/6 to 12/6; Pears, N.Z. W.N., 5/- per tray.

Glasgow (June 18.—Apples in good supply, N.Z. predominating. N.Z. Jon., 12/- to 12/6; ex. fine, 12/6 to 13/-; Del., 12/6 to 13/-; G.S., 18/6 to 19/-; Grapefruit, Cal., 30/- to 32/-; Oranges, Cal. "Sunkist," 26/- to 28/-; S. African navels, 18/- to 22/-; Grapes, S. African Ohanez, 9/- to 9/6 per 8 lb. box; Peaches, English, 8/- to 15/- per doz.; Pears, N.Z. W.N., 4/- to 5/6 per tray.

Liverpool (June 18).—Tas. Ribston, 10/6; Sturmer, 12/- to 14/-; Dunn's, 10/6 to 12/3; C.O.P., 13/6 to 16/9; Cleo., 12/6 to 15/-; Oranges, Valencia, 240's, 18/- to 30/-; S. African Navels, 22/-; Strawberries, English, 9d. to 1/- per lb.; Gooseberries, 2½d. to 3d. per lb.

Manchester (June 18).—Trade steady. Aust. Cleo., 16/- to 18/-; Dunn's, 11/- to 14/-; Jon., 15/- to 17/-; Tas. Cleo., 15/- to 17/-; Sturmer, 13/- to 15/-; N.Z. Cleo. and Del., 16/- to 18/-; Oranges, "Sunkist," 30/- to 32/-.

Newcastle-on-Tyne (June 17). — Messrs. White & Leatherland report:—N.S.W. Apples, G.S., 13/- to 18/6; K.D., 10/3 to 12/3; Jon., 10/6 to 12/-; R.B., 10/6 to 11/6.

Hamburg Sales.—Catalogues showing sales of Australian and New Zealand fruit are to hand from J. H. Lutten & Sohn, Ph. Astheimer & Sohn, and Timm & Gerstenkorn, of Hamburg, Germany.

New South Wales.

Sydney (23/7/30).—Mr. F. Chilton, City Markets, Sydney, reports prices as follows:—

Queensland Fruits.—Bananas, 14/- to 26/- per case; Pines (Queens), 8/- to 10/-; Tomatoes, 3/- to 5/- per half-case; Custard Apples, 3/- to 5/- per tray.

New South Wales Fruits.—Bananas, 14/- to 26/- per case; Oranges, commons, 3/- to 5/- per bus. case, Navels 6/- to 8/-; Sevilles, 4/- to 5/-; Mandarins, 2/6 to 5/-; Lemons, 4/- to 7/-; Apples, R.B. 6/- to 11/-, G.S. 7/- to 13/-; Pears, Packham 8/- to 12/-, Josephine 8/- to 12/-; Passions, 6/- to 12/- per half-case.

Victorian Fruits.—Apples, Jon. 6/- to 9/- per bus. case; Pears, Packham 7/- to 12/-, Howell 6/- to 8/-, B.B. 6/- to 7/6.

Tasmanian Fruits.—Apples, Democrat (Tasma) 7/- to 11/- per bus. case, Crofton 6/- to 10/-, Jon. 5/- to 10/-, S.P.M. 5/- to 9/-, G.F. 5/- to 8/-, N.Y.P. 4/- to 9/-, F.C. 6/- to 9/-. Pears, W. Cole 6/- to 10/-, Jos. 7/- to 10/- Easter Beurre 4/- to 7/-. (Corresponding prices for half-cases.)

A fair demand exists for Apples and Pears of good quality. Pines and Tomatoes are heavily supplied and meeting a poor demand. Citrus fruits, especially Mandarins, are very plentiful. Inferior qualities very difficult to sell even at low prices.

Victoria.

Melbourne (31/7/30).—The following prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, ruled in the Western Market yesterday for average quality fruit:—Apples, good to choice eating 3/6 to 7/6 a case, good to choice cooking 4/- to 6/-; green Bananas, Queensland, special and choice 24/- to 25/- a double case, standard 19/- to 23/-, plains 16/- to 18/-, rust-affected lines lower; Lemons, 5/- to 8/- a case, few specials higher; Mandarins, New South Wales, 3/- to 6/-, Milduras to 8/-; Grapefruit, 9/- to 12/-; Oranges, common, bulk 3/- to 5/-, Milduras to 7/-, small almost unsaleable; navel Oranges, 6/- to 8/-, Milduras to 9/-, specials higher; Passion Fruit, Victorian 16/- to 18/-, Queensland, 8/- to 9/- a half-case; Pineapples, Queens, 9/- to 12/- a double case, weak demand; Tomatoes, Queensland, repacked, 5/- to 7/- a half-case; Beans, Queensland, 4d. to 5d. a lb., few 6d.

The Melbourne market manager of the Federal Citrus Council of Australia reports:—"The citrus market is dull, and prices are unchanged. Sales were as follow:—Average standard shed pack navels, including Victoria and M.I.A., 72-113, 6/- to 7/6; 125 up, 8/- to 9/-; good South Australian and best Victoria, 75-84, 9/-; 96-112, 10/-; 126-154, 11/-, averaging 10/- a case, all counts in; some wrapped, 11/- a case, all counts; a few selected lines higher; a few commons, 5/- to 8/-. Mandarins, New South Wales Emperors to 6/-; a few specials higher; small difficult of sale. Lemons, dull, medium sizes, 180-248, to 7/-; a few specials, 9/-; small or marked, from 5/-; Grapefruit, average packs, sales slow, 9/- to 12/-; a few selected lines, 18/-. Poormans, limited demand at 9/- to 11/- medium sizes. Sevilles, a few, medium sizes, to 9/-."

South Australia.

Adelaide (26/7/30).—Apples (eating) 4/- per case, (cooking) 3/- to 3/6 case; Grapes (dark) 9/- case (white) 9/- case; Lemons, 7/- to 8/- case; Oranges (common) 6/- to 7/- case, do. (blood) 7/- case, do. (Mandarin) 10/- case, do. (navel) 10/- to 11/- case, do. (poorman) 5/- case. Pears (eating) 5/- case, do. (cooking) 3/- case; Pineapples, 16/- case; Quinces, 5/- case.

Tasmania.

Hobart (26/7/30).—Fruit market steady. S.T.P., 3/- to 6/-; F.C., 3/- to 5/6; Del., 5/- to 8/6; Democrats, 3/6 to 7/6; Jonathans, 3/6 to 5/6; S.P.M., 3/- to 5/-; C.E., 2/6 to 3/9; N.Y.P., 3/- to 7/-; Pears, B.A., 6/- case.

Western Australia.

Perth (24/7/30).—Jon. (dumps) 8/- to 12/6, Dunn's Seedlings 8/- to 12/-, Yates 9/- to 16/-, (inferior from 6/-), Granny Smith 9/- to 15/3, Cleo. 8/- to 12/6, Doherty 8/- to 11/-, other varieties 5/- to 12/-. Citrus: Market showed no improvement, although occasionally very prime lines sold up to 12/- for dumps and 7/6 for flats. Average market quotations:—Navels, flats 2/- to 6/-, dumps 4/- to 10/-; Lemons, 3/- to 6/6; Mandarins, flats 5/- to 9/- (others from 3/-); Pears, all varieties, flats 4/6 to 7/-, dumps to 8/6, half-bushels 2/6 to 5/6; Passion, half-bushels 15/6 to 22/-.

Queensland.

Brisbane (28/7/30).—Tasmanian Apples, S.P.M. 2½in. and 2¾in. 11/6 to 12/6, 2⅜in. 9/6 to 10/6, 2¼in. 9/- to 10/-; Jon., from 9/- to 12/6; R.B., 9/- to 11/-; A.R.O., 9/- to 11/-; N.Y.P., 9/- to 11/-; French Crabs, 2½in., 2⅝in., and 2¾in., 12/- to 13/-; 2¼in. and 2⅜in., 8/- to 11/- per case. Pears from Tasmania: G.S., 8/- to 11/- per case. Victorian Apples: Jon., best, 12/- to 13/- per case, others 8/- to 11/-; R.B., 8/- to 10/-; Statesman, 8/- to 10/- per case. Victorian Pears: W.C., 10/- to 13/- per case; W.N., 11/- to 13/-; Jos., 11/- to 13/-; B.B., 9/- to 10/-; B.P., 7/- to 10/-; Keiffers, 7/- to 9/-; Oranges, 4/- to 7/- per case; navels, 6/- to 9/-; Mandarins, Glens, special 9/- to 12/-, others from 5/- to 7/-; Scarlets, 4/- to 9/-; Emperors,

To Tomato Growers and others——

WINDOLITE

UNBREAKABLE GLASS SUBSTITUTE,

admits ULTRA VIOLET RAYS (ordinary glass does not), and is frost, rain and weather proof—keeps out the cold and wet.

"WINDOLITE" means early fruit and more fruit, as it ensures strong, robust, healthy and rapid growth by admitting all the sunlight and the vitalising, health-giving Rays. These Rays mean better fruit.

Windolite has stood the test for years under the severe English climatic conditions.

Windolite is light, flexible, easy to cut and fix. No heavy and expensive framework required.

WINDOLITE for universal Use

Sold in 36in. Width; cut to any length at **9/-** per sq. yard, by the following Melbourne Firms:—

JAS. McEWAN CO. PTY. LTD.
D. & W. CHANDLER LTD. (and at Fitzroy).
MYER EMPORIUM LTD.

Ask your storekeeper to get it.

Write for sample and particulars to the Australian Agents:

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Canadian Standard Cases
C. H. TUTTON Pty. Ltd.
ROYAL EXCHANGE BUILDINGS, 40 QUEEN ST., MELBOURNE
Telephone: F 3148 (3 lines). Telegraphic Address: "TUTBOX."

SUPPLIERS OF ALL KINDS OF SOFTWOOD CASES.

Some Advantages in Favour of Canadian Standard Softwoods Cases.

1. Full drawback of Duty allowed on all cases exported.
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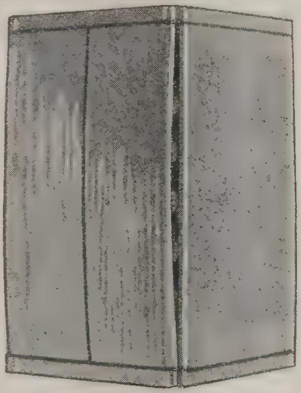


Canadian Standard Bushel Case as used in Canada, America, N.Z.

5/- to 8/-; Waratahs, 5/- to 7/6; Feutrels, 4/- to 7/-; Kings and Excelsiors, 5/- to 7/-; Lemons, coloured, medium size, 4/- half-case, others 1/- to 3/- per half-case. Custard Apples, 2/- to 3/- per case. Papaws, colored, 4/- to 6/- per dump case; green, 2/- to 3/-. Smooth-leaf Pines, 4/- to 7/- case. Grapefruit, 2/- to 3/6 per case. Passion Fruit, 3/- to 6/- per case. Granadillas, 10/- to 13/- per case.

NEW ZEALAND FRUIT PRICES.

Dunedin, 10/7/30.—Messrs. Reilly's Central Produce Mart, report prices as follows:—American Valencias, 50/-; N.S.W. Navels, 16/- to 20/-; Victorian, 18/- to 20/-; Mission Lemons, 62/6; Australian, 25/6; Island Oranges, choice repacks, 18/-; Grape Fruit, 50/-; Passions, 25/-; Pineapples, choice Queens, 24/-; Bananas, choice ripe, 25/-; Mandarins, choice, 18/- to 21/-.

FRUIT MARKETING.

Sydney Trader's View.

FRUIT SELLING from the agents' point of view was the subject of an interesting address by Mr. F. Chilton (City Markets, Sydney), before the Annual State Conference of the Agricultural Bureau at Hawkesbury Agricultural College on July 24.

Mr. Chilton said that the statements were published at times regarding low prices to growers and high prices in shops. Both could be correct—only the fruit sold at high prices to the public was not the same fruit which sold at low prices wholesale. Last season, when Plums were 2/6 per bushel, some growers were receiving 15/- to 20/- per bushel for choice kinds.

Growers should specialise in growing, grading and packing. There was far too much rubbish regularly coming on to the market.

Growers should specialise in growing kinds and varieties suited to the district, and limit the assortment as much as possible: honesty was essential in branding: the market needs should be studied, and close co-operation between the producer and his agent would bring best results. Mr. Chilton dealt in detail with the different types of cases and their suitability for the several fruits.

AUSTRALIAN JAM.

Consumption Declining.

Effect of High Sugar Prices.

IN 1912, when the Australian population was 4,746,801 persons, the jam manufactured totalled 85,890,929 lbs., or 18 lbs. per head of population. In 1928-29, when the population had increased to 6,414,373 persons, the quantity of factory jam produced declined to 75,252,189 lbs., or 11¾ lbs. per head of population.

On the basis of population as compared with the 1912 figures, this represents a decrease of 38,000,000 lbs. of jam. Allowing half of this to be fruit, the quantity is 19,000,000 lbs., or 475,000 bushels.

This is quite apart from the lessened quantity of fruit being used by housewives for home jam-making.

TRADE WITH THE EAST.

Conference in Sydney on August 11.

TO INVESTIGATE the possibilities of extending Australia's export trade to China, Siam, Federated Malay States, the Philippines, India, and the Near East, a conference of all interested has been called to meet in Sydney on August 11.

This conference has been called by Mr. Parker Moloney, Minister for Markets, and it is anticipated that much good will result.

FRUIT FLY LURE.

"Clensel" Appreciated in Western Australia.

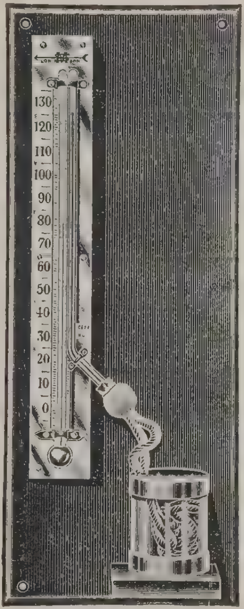
THE Director of Agriculture for Western Australia (Mr. G. L. Sutton) has issued a report prepared by the economic entomologist (Mr. L. J. Newman) regarding an important fruit fly lure.

Some years ago Mr. Newman discovered what became known as the pollard lure for fruit fly, which was successful in Australia and other parts of the world. Early in May, however, Mr. Newman experimented with an insecticide known as "Clensel," and this proved to be superior to the pollard lure as an attractant. Even when diluted by rain "Clensel" retains its potency. The strength used was one part "Clensel" to 30 parts water, renewed every 10 or 12 days.

This discovery was deemed to be of sufficient importance to warrant this official approval. Tests are being continued to see how "Clensel" acts during the hotter and drier months of the year.

The Australian representative for "Clensel" is Mr. Bruce Anderson, 54a Hoddle-street, Abbotsford, Melbourne, Vic.

Glasgow, 11/7/30.—Messrs. Simons & Co., Glasgow, cabled to Messrs. Barker, Green & Parke, Melbourne, on July 11, as follows:—"Anchises" Jonathan, two quarter, 9/- to 9/9, larger 12/-; Dunn, 6/9 to 8/-, 8/9 to 10/-; Cleos., 8/- to 8/6, 10/- to 11/-; Rome, 6/6 to 8/-, 8/- to 9/6; Granny, 15/- to 15/6; various, 6/6 to 8/3, 7/3 to 10/-.



Frost Predictor Thoroughly Reliable, Read at 5 p.m.

Gaunts'
Est. 1852.

Frost Fighting
and
Frost Predicting
by Gaunts.

Forewarned
is
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Our Predictors
Forecast Frosts
FIVE HOURS
BEFORE HAND
50/-

T. GAUNT & CO. PTY. LTD.
Watchmakers, Diamond Merchants and Opticians
337-9 Bourke Street, Melbourne. C.1.

Preliminary Announcement!

THE "RELIABLE"
WEED, SEED and INSECT KILLER

The Wonderful Flame Throwing Machine with a controlled flame 2ft. wide, 10ins. deep and 3ins. thick of 450 degrees of heat that kills the weeds, seed and insects WITHOUT INJURY to the trees.

R. W. SIDCO,
Mellor Street - - Gympie - - Queensland

Price £10 F.O.R. **Correspondence**

ORNAMENTAL TREES AND SHRUBS.

THE MONTH OF AUGUST is recognised as a good month for planting various ornamental trees and shrubs. The following is a list of shrubs for present planting, supplied to us by Messrs. C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, Vic.:—

Acacias (in fourteen beautiful varieties); **Birch** (Betula alba), for cooler parts; **Catalpa** japonica, speciosa, syringifolia atropurpurea; **Chamaecerasus** (syn. Lonicera), hardy deciduous free flowering shrub, in eleven varieties; **Dielytra spectabilis** (Bleeding Heart), a perennial, deep pink and white flowers; **Erica** Wilmoreana; **Escallonia**, evergreen flowering shrub, available in five varieties, including exoniensis, Fretheyii, pendula, rosea, rubra; **Forsythia Fortunei**, a pretty dwarf-growing shrub, free flowering; **Grevillea robusta**; **Guava**; **Laurel**; **Magnolias**, in five varieties; **Oaks** in the following six varieties: bicolor, English, lusitanica, macrocarpa, palustris, Turkey; **Poplars** in the following eight varieties: alba, bolleana, canadensis aurea, Van Geerti, dilitata, golden, macrophylla, monolifera, monolifera aurea; **Robinias**, for avenue and garden planting, five varieties; Tristania **conferta**. Particulars of the Messrs. Nobelius' flowering Plums and Peaches are advertised elsewhere in this issue. Trees for sale at the present time are from 4 ft. to 6 ft. in height. Varieties include: Clara Meyer, crimson, pink, versicolor, weeping (flowers red), weeping (flowers striped), white and pink. Japanese ornamental Plums are covered by the following: Prunus blireiana flore pleno, Prunus moseri flore pleno, Prunus mume, Prunus nigra, Prunus pissardi, Spinosa purpurea, triloba flore pleno, Vesuvius.

CLENSEL
Insecticide and Fungicide
(British Product)

"There is another very important point which we cannot emphasise too strongly, and this refers very specially to trees and bushes.

The great secret is not to wait until the pests make their appearance, but to spray the plants, trees or bushes with a dilute solution of

CONCENTRATED CLENSEL INSECTICIDE

and water; anything from a 1 per cent. to a 6 per cent. solution, while the pests are invisible and in the larvae stage, and this spraying process should then be repeated at intervals of round about 2—3 weeks throughout the season. For years many growers were averse to adopting this procedure, but many have told us that the actual cost of this is many times wiped out by the increased production which they receive, coupled with the fact that their Gardens and Orchards are in perfect condition which represents thoroughly sound capital."

Also copy of letter from Sheehan Bros., Red Hill, mentioning that Harcourt have had the same success with Clensel.

Distributors wanted for Queensland and New South Wales.

Full details from
Bruce Anderson
54a Hoddle St., Abbotsford, N.9, Victoria.

Fruit and Ornamental Trees
Grown for Sale by
C. A. Nobelius & Sons Pty. Ltd.
Gembrook Nurseries,
EMERALD, VICTORIA

Telephone: Box Hill 154 **Catalogue on Application**
Inspection Invited

"FRUIT WORLD ANNUAL."

Comprehensive review of Australian and New Zealand fruit industry

"The Fruit World," Box 1944 G.P.O., Melbourne.

"As busy as Western Market"
H. LOUEY PANG & CO. PTY. LTD.
Fruit, Produce and Commission Agents
172-176 LITTLE BOURKE ST., MELBOURNE
(Also at Victoria Market) G.P.O. Box No. 795 Melbourne.
References—E.S. & A. Bank, 225 Swanston St., Melbourne.
GOOD PRICES ASSURED
CHEQUES SENT DAILY—IMMEDIATELY CONSIGNMENT IS SOLD.

. The .
"GARDEN LOVER"
Australia's Greatest Horticultural Monthly
Price, 6d. 6/- per Annum

The Australasian POULTRY WORLD JUST ISSUED
Secure Your Copy Now — Price **6d.** all News Agents

BORERS IN FRUIT TREES.

Methods of Control.

BORERS OF DIFFERENT SPECIES infest fruit trees, but that known as the Cherry tree moth borer (Cryptophaga unipunctata) is the one that comes mist commonly under the notice of fruitgrowers. Although it is commonly known as the Cherry tree borer, it is in reality a native species which breeds mostly in the Wattles. From these it has turned its attention to cultivated fruit trees, and Peaches, Plums, and Cherry trees are frequently attacked.

The life-history briefly is that the adult moth deposits her eggs upon the surface of the bark, and the larva on hatching bores into the branch for a short distance and then turns downwards. The tunnel is increased in size as the larva grows until it is finally two to three inches long when the larva is full grown. During the day the larva chiefly hides in the tunnel, coming out at night to feed upon the bark surrounding the opening into the tunnel.

The damaged bark is always covered with a mass of gnawed wood and excrement webbed together by fine silken strands, and this mass of webbed material may sometimes extend for a considerable area.

The larva when fully developed is about 1½ inches in length. It is a smooth, dull reddish-brown caterpillar with a few scattered hairs along the sides of the body. When fully fed it pupates in its vertical tunnel, the opening of which it plugs up with a wad of silken web and chewed wood. The adult moth which later emerges from the pupa measures 1½ inches across the outspread wings. The head, thorax and wings are satiny white in color, with minute black spots in the centre of each fore-wing. The upper surface of the abdomen is black, marked with orange, which forms a thick tuft at the end of the body.

As soon as the presence of the caterpillar is detected all grass-like material should be removed. The opening into the tunnel can then be readily located and the larva killed by inserting into the tunnel a piece of wire and twisting it round. Another method is to inject a few drops of kerosene into the tunnel with an oilcan. This causes the caterpillar to crawl out, when it can be destroyed.—N.S.W. Department of Agriculture.

AUSTRALIAN CONFERENCE OF FRUITGROWERS.

"Appreciating the Other Fellow's Viewpoint."

Mr. R. E. Fowler, one of the Victorian delegates to the recent Australian Conference of Fruitgrowers at Hobart, writes appreciatively of the good accomplished, as follows:—

Looking back on the Conference, I think that though the delegates disagreed on many points, there was a greater measure of general agreement than most of us expected, and even where no apparent result was obtained, as in the grading question, the fact that we have got together and thrashed out the various points makes it easier later on to reach a real agreement, inasmuch as we all know better now and appreciate the other fellow's point of view and the problems peculiar to his State or district.

M. ASVARISCH
FRUIT BROKER
Copenhagen - Denmark
Consignments Received. Jorks Passage.
Telegraphic Address: Asvarisch, Copenhagen.
Inquiries for Victoria and South Australia.
to
J. B. MILLS & CO.
528 Collins Street, Melbourne

PEDIGREE FRUIT TREES
All Sorts of Deciduous and Citrus, Including
Valencia, Washington, Grape Fruit, Lemons.
All Citrus are Raised on New Land with a Wonderfully Fibrous Root System.
Limited quantities of Valencia available from N.S.W. Bud Selection Society's Selected Wood.
Quality Prime for 1930 ORDERS NOW BEING BOOKED Get Our Prices
F. FERGUSON & SON
Australian Nurseries also at Camden Hurstville N.S.W.

"THE VALUE OF SULPHUR.

(By W. Auton in "The Gardeners' Chronicle.")

Sulphur is one of the fourteen elements known to be essential to plant life, is of very great importance and scientific interest, and probably few chemicals render such a service to cultivators. It acts as a carrier in many of our so-called artificial manures, and by chemical means modifies the composition of soils, rendering certain substances assimilable. It is also said to help bacteria in their work of preparing food for the plant, while its fungicidal and insecticidal properties are well known.

It is asserted that if one incorporates fine sulphur, at the rate of 100 lbs. per acre, with the soil, productivity is definitely increased. How does sulphur act under these conditions?

If one applies it to a sterilised soil its action is insignificant, whereas in a non-sterilised soil its action is very marked.

One can deduce from this that its action has a beneficial influence on the bacteria in the soil. It appears to augment the quantity of nitrogen assimilable, by the activity which it communicates to ammonia making bacteria and nitrifying ferments. It is well known that this action can only manifest itself in soils charged with humus, the carbohydrates of which are so necessary for the normal development of bacteria. On the other hand, by means of bacterialisation, sulphur may oxidise itself in the soil and become sulphuric acid. Under the influence of certain anaerobic microbes it would appear that sulphuric acid can be transformed into hydric sulphuric acid, and this may be the cause of the beneficial action of sulphur on vegetation.

It acts then as a partial steriliser of the soil, defending the useful bacteria from their natural enemies in the protozoa.

Sulphuric acid combines with bases to be again broken down in the series of transformations to the reciprocal benefit of the plant and the bacteria which enable it to live. The agents which operate these diverse transformations may be chemical or biological and it has already been shown that through the influence of various micro-organisms, sulphur is oxidised and becomes sulphuric acid, which, combined with bases, produces sulphates.

Sulphates decomposed by the aid of oxygen give off sulphuretted hydrogen, whereas sulphur submitted to the influence of microbes, in the presence of oxygen, becomes oxidised. The processes of oxidation render the presence of oxygen, becomes oxidised. The processes of oxidation render the presence of carbohydrates useless as a source of energy, whereas in the reduction of sulphates which operate without the absorption of heat, the hydrates of carbon are indispensable to enable the reaction to proceed normally. According to these phenomena of chemistry of biology, studied in masterly fashion by Monsieur Kayser, it is not surprising that sulphur should be called upon to render such great service to cultivation.

Numerous experiments with sulphur have been made during the last few years. A report in "L'Ecliquireur Agricole et Horticole" records an increase of one hundred per cent. from potato tubers cut for planting and dusted with sulphur over those not sulphured. Le comptoir Parisien has obtained excellent results in its field of experiments at Sartronville by employing sulphur in the cultivation of Peas, Potatoes, Spinach, Cabbage, Carrots and Onions.—W. Auton in the "Gardeners' Chronicle," Eng.

Wrong Either Way.

"Charlie, if I were to die, would you marry again?"

"That question is hardly fair, my dear."

"Why not?"

"Because if I were to say 'Yes,' you wouldn't like it, and to say 'Never again' wouldn't sound very nice."

GLASS CLOTH
CHEAPER THAN GLASS
For POULTRY & PLANTS
USE THE ULTRA-VIOLET RAYS

3/- per sq. yard.

The name Glass Cloth is imprinted on every yard.

Sole Distributors:

DONOHOE & THOMPSON

(Donohoe & Holohan Pty. Ltd.)

369 Post Office Place, Melb.

Samples on Request.

Cooksley & Co.

(W. P. COOKSLEY)

Reliable Fruit Agents

Over 30 Years Experience

TRY THEM!

Telegraphic Address:
"COOKSLEYS," BRISBANE

Fruit Exchange, Brisbane

QUEENSLAND

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Reference: Commercial Banking Co. of Sydney Ltd.

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6d. Per Copy **6/-** Per Annum

Ship Your Oranges, Lemons, Grapes to New Zealand

All consignments for this market will have careful attention and realize highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

Personal supervision of every consignment.

Cheques posted promptly.

Drop us a Line or Cable "Peachbloom," Dunedin.

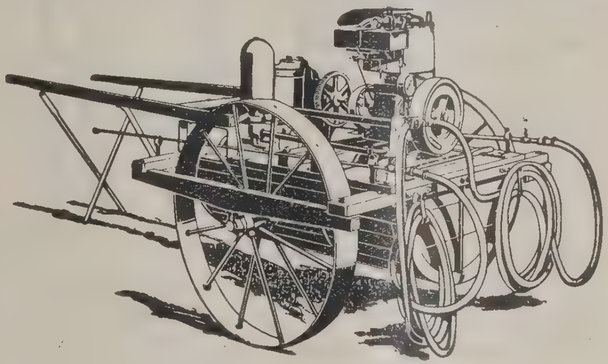
It is Not Sufficient to Merely Spray Fruit Trees

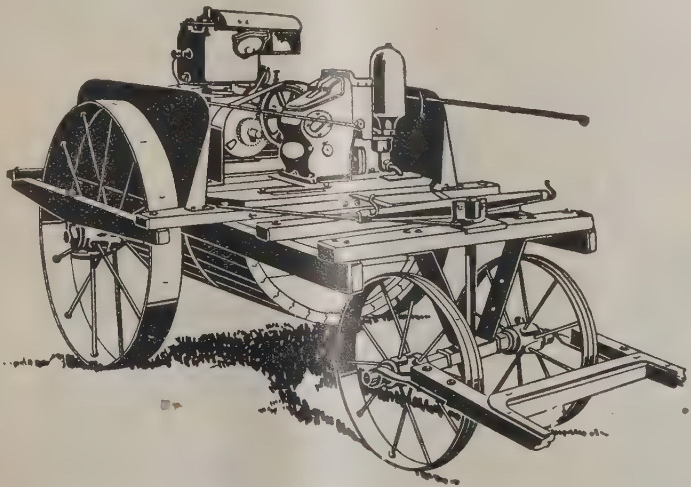
The Job must be done Properly and You can't
do that unless you have the Right Plant.

Few realize what the difference between good and indifferent Spraying means to them.

RONALDSON-TIPPETT

have co-operated with leading growers in Australia to produce a spray plant embodying all practical features essential to good spraying. Write us and we will tell you about our exclusive designs which mean so much to you in bigger and better returns from your orchard.





In these Times Particularly

you cannot afford to neglect the vital matter of good spraying.
The largest and most experienced growers throughout Australia are purchasing Ronaldson-Tippett plants in ever increasing numbers.

THERE'S A REASON.

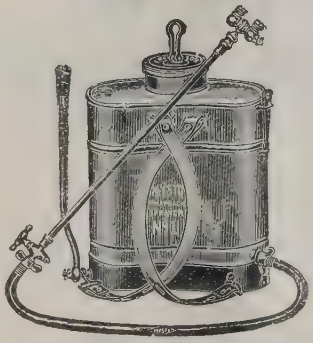
MADE IN EIGHT DIFFERENT SIZES and TYPES

Ronaldson Bros. & Tippett Pty. Ltd.

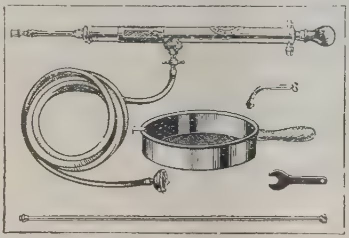
Head Office and Works: 156 CRESWICK ROAD, BALLARAT

Show Rooms: 630a Bourke St., Melbourne.	N.S.W.: Land's Place, Orange.	Southern Tasmania: Max Geeves, Davey St., Hobart.	Northern Tasmania: Bell & Gerrard, 100 Cimitiere St., Launceston.	West Australia: Perdriau Place, off Hay St., Perth.

SPRAY PUMPS For BUCKET, BARREL or VAT

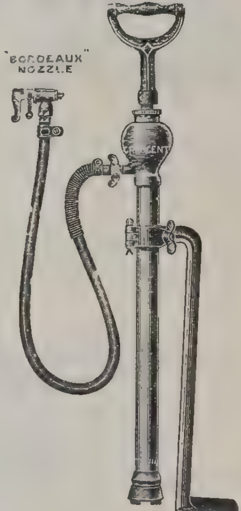


"THE MYSTO"
Knapsack Spray Pump,
with **Lead-coated Copper Container.** Inside pump, **price £5/10/-.** Outside pump, **£6/2/6.**



THE "MYSTO GEM"
Spraying Outfit,

For spraying Trees, Shrubs, and Hothouse Plants. For Limewashing Outhouses, Fowl Pens, etc., Disinfecting Dogs and other Animals. The ideal All-purpose Hand Sprayer, giving continuous spray. Complete, as illustrated, with 3 Nozzles, 35/-.


"BORDEAUX" NOZZLE
CRESCENT

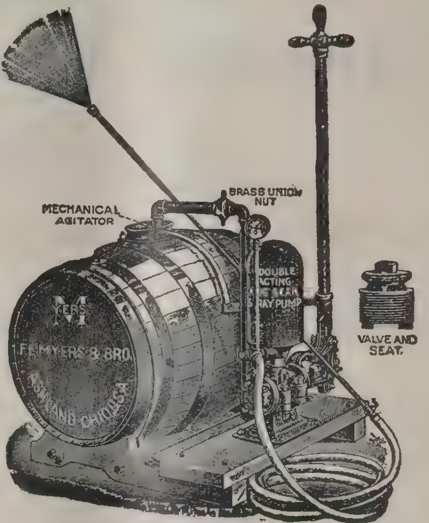
Nº 33

THE "CRESCENT" BUCKET SPRAY PUMP.

Specially suitable for Whitewashing, Disinfecting, Washing down Motors and other Vehicles, etc. Complete with 5ft. Hose, 15in. Brass Extension Rod, and Bordeaux Nozzle. **Price, 30/-.**

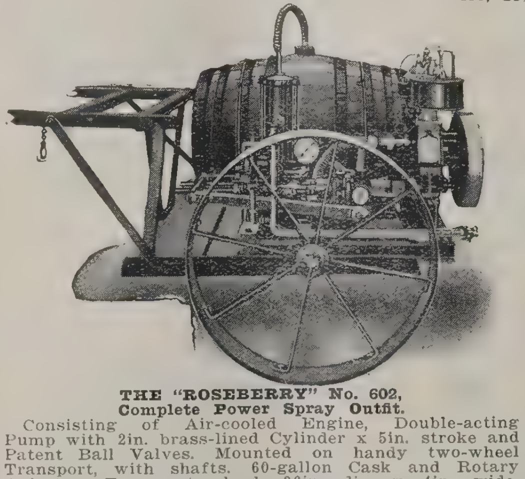
THE "MYSTO JUNIOR."

Similar to the "Crescent," but slightly smaller. Complete with 5ft. Hose, Brass Extension and 2-way Nozzle. **Price, 25/-.**


MECHANICAL AGITATOR
BRASS UNION NUT
DOUBLE ACTING SPRAY PUMP
VALVE AND SEAT
MYERS
F.E. MYERS & BRO.
ASHLAND OHIO

MYER'S COG GEAR SPRAY OUTFIT.

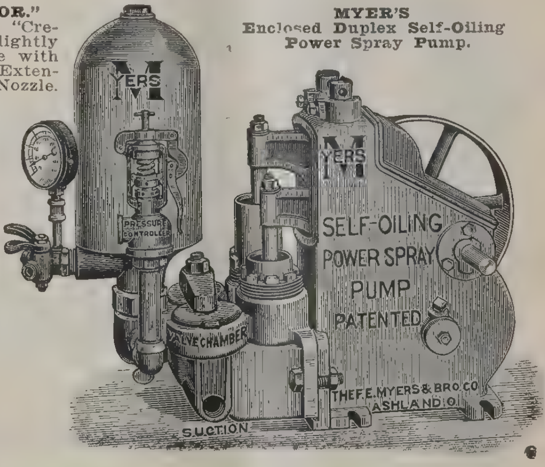
Comprising: No. R309 Cog Gear Pump with 2in. removable Brass Cylinder, Brass Valves and Ground Bevel Brass Seats and Hemp-packed Plunger, Pressure Gauge, Double Cut-off and Strainer for Suction Pipe. Mounted on Skids with 50-gallon Cask and Mechanical Agitator. **Price,** without hose or fittings, **£14/10/-;** or **Pump only,** with Gauge, Double Cut-off and Strainer for Suction Pipe (no hose or fittings), **price, £9/10/-.**



THE "ROSEBERRY" No. 602,
Complete Power Spray Outfit.

Consisting of Air-cooled Engine, Double-acting Pump with 2in. brass-lined Cylinder x 5in. stroke and Patent Ball Valves. Mounted on handy two-wheel Transport, with shafts. 60-gallon Cask and Rotary Agitator. Transport wheels 36in. dia. x 4in. wide. Complete with Pressure Gauge, Relief Valves, Suction Hose, and Strainer. Two lengths of Special Spray Hose, and fittings. **Price, £85.**

MYER'S
Enclosed Duplex Self-Oiling Power Spray Pump.


MYERS
PRESSURE CONTROLLER
SELF-OILING POWER SPRAY PUMP PATENTED
VALVE CHAMBER
THE F.E. MYERS & BRO CO ASHLAND O
SUCTION

This Pump is sand, dust, and dirt proof. Fitted with Machine Cut Gears, 2½ x 2½ in. Duplex Cylinder, Porcelain-lined. Automatically controlled. Suitable for 300 lbs. working pressure. Complete with Pressure Gauge, Double Cut-off, Pressure Regulating Valve, and Strainer for Suction Pipe.

Price, £30.

GENUINE "MYERS" POWER SPRAY GUN,
Price, 42/6.

WELCH, PERRIN & CO. PTY. LTD. 48-56 Queen's Bridge St., Sth. Melb.

Control Orchard Pests Scientifically with

VOLCK

READ WHAT GROWERS SAY:—

Mr. R. E. Fowler, of Pomonal, who won the Apple Export Grand Championship of Australia for the Best Five Cases Apples, for export overseas, says, 22/3/30:—

"For myself, I may say that VOLCK is all that the manufacturers claim it to be. It is clean to use, effective in results, and safe under almost any conditions. In reference to this last, I used VOLCK at a strength of 1½ gallons in 100 gallons of water applied on March 1, which was a hot day, to Jonathans that were ready to pick, but which I wished to leave for another two or three weeks. There was not the slightest injury to fruit or foliage; and these Apples when picked showed complete protection from the attack of late broods of codlin moth. I shall certainly use larger quantities of VOLCK next year."

Mr. W. J. Cox, Pomonal, writes as follows, 17/3/30:—

"I have given VOLCK a trial on two acres of Esopus Spitzenberg Apples. I used ¾ of a gallon of VOLCK and 2½ lbs. Arsenate to 50 gallons of water for four sprays; the result is very satisfactory. I selected the Esopus for a trial, as they carried a fair crop last year, when the moth was so bad. I find it an excellent spray for Cherry Aphis when mixed with Nicotine Sulphate; with four sprayings the trees are perfectly clean."

Mr. H. G. Petty, Templestowe, writes:—

"I have used your Oil Orthol-K in combination with Arsenate of Lead on all my Apples during the past season. Results have been excellent, fruit and foliage being particularly bright and clean. Codlin Moth infestation has been negligible—the lowest yet experienced The most gratifying result of using Oil is the reduction in the number of stings and the complete control of Red Spider This alone I consider warrants the use of your Oil again."

An extract from a letter received from Mr. R. K. Bazley, Ardmona, 17/2/30, reads:—

"I might state that I had splendid results both as a check for red spider and codlin control. These results were very pronounced, and can be verified by local fruit inspector. Next season I intend using as a control for aphis (green)."

A letter from Mr. D. Roberts, Narre Warren, 26/5/30, reads:—

"In regard to the VOLCK Oil purchased from you, I think it is very effective in controlling the late brood of grubs. I used it as a last spray, and the fruit had a much finer appearance than that which I sprayed with lead only. I found that the leaves kept greener much longer than those sprayed with lead. I can recommend it for a very late spray, and would like to try it out with lead for the earlier sprays."

The Irymple Packing Pty. Ltd., Irymple, 14/5/30:

"We are pleased to advise you that the use of VOLCK as a citrus spray is becoming much more general in this district. VOLCK is now looked upon as the essential spray for citrus fruits. During the past two seasons growers have had wonderful success with this mixture. We hope to do substantial business in this line this season."

Messrs. J. Hammond & Sons, Officer, write, 15/4/30:—

"Having used VOLCK extensively this season, I can testify to its effectiveness. Without a doubt, I can safely state that in my orchard we have had much less than 1 per cent. codlin. I feel sure that if properly applied VOLCK will put hundreds of pounds into the growers' pockets. I should like you or your representative to see the fruit we are now handling; there is nothing better in Australia."

For official results of tests conducted by the Department of Agriculture:—

CODLIN MOTH CONTROL.—See Journal of Agriculture, 1928, page 461.

CODLIN MOTH CONTROL.—1928-29, see Journal of Agriculture, September, 1929.

RED SCALE.—On citrus trees, see Journal of Agriculture, October, 1929, pages 596-98.

PEACH APHIS AT SHEPPARTON.—In conjunction with Nicotine Sulphate, see "Argus," October 16, page 18.

ENQUIRE FROM:—

Victorian Agents:
H. C. PANNIFEX & CO.,
26 Market-street, Melbourne.

New South Wales Agents:
THE AUSTRALIAN FRUIT & PRODUCE CO.,
Fruit Exchange, Sydney.

Queensland Agents:
THE AUSTRALIAN FRUIT & PRODUCE CO.,
Fruit Exchange, Sydney.

Tasmanian Agents:
W. H. IKIN & SON, Hobart.

South Australian Agents:
SILBERT, SHARP & BISHOP,
Rundle-street, Adelaide.

West Australian Agents:
PATERSON & CO., Perth.

VOLCK was introduced to the Grower in 1922, and is the only White Oil Spray that has been used on thousands of acres over seven successive years.

VOLCK'S PRODUCTS INCLUDE:—

VOLCK SPRAYING OIL.
ORTHOL-K. SPRAYING OIL.
KLEENUP SPRAYING OIL (Dormant).
DEL MONTE LIQUID SPREADER.
VOLCK'S ORTHO ARSENATE OF LEAD (Powder).
VOLCK'S ORTHO ONE PACKAGE BORDEAUX.

There is NO SUBSTITUTE for

VOLCK

CODLIN MOTH CONTROL

Recent Tests in Victoria

Show Outstanding Success of

"Elephant" Brand

Arsenate of Lead and White Oil

The following are the results of these tests:

Mr. Thiele's Orchard, Doncaster

	No. of Sprays applied.	Spraying Cost.	Percentage Clean Fruit.
W. Cooper & Nephew Ltd.	6	£3 1 8	74%
Blyth Chemicals Ltd.	7	2 13 11	80%
„ „ „	6	1 1 6	81%
V. Leggo & Farmers Ltd..	7	2 10 5	80%
H.C.Pannifex & Co. (Volck)	7	3 6 2	88%
JAQUES PTY. LTD	8	1 12 9	92%

Mr. Petty's Orchard, Templestowe

	No. of Sprays applied.	Spraying Cost.	Percentage Clean Fruit.
Blyth Chemicals Ltd.	5	£1 13 8	98%
JAQUES PTY. LTD.	6	1 4 0	98%
H. C. Pannifex & Co... ..	6	2 17 6	98%
W. Cooper & Nephew Ltd.	5	1 19 8	98%
H. C. Pannifex & Co... ..	6	2 18 2	98%
V. Leggo & Farmers Ltd.	6	2 0 5	96%

Analysis of Materials Used.

	Arsenate of Lead Arsenic Pentoxide.
JAQUES PTY. LTD.—Elephant Brand..	33.06%
Blyth Chemicals Ltd.—Bluebell..	32.78%
W. Cooper & Nephew Ltd.—Arsinette..	31.19%
V. Leggo & Farmers Ltd.—Vallo	32.20%
H. C. Pannifex & Co.—Ortho	31.91%

	White Oil Oil.	Emulsion. Moisture.
ELEPHANT BRAND	79.10%	20.4%
Bluebell	77.50%	22.1%
Alboleum..	72.90%	26.7%
Vallo (this oil was not an emulsion)	92.40%	7.4%
Volck	79.20%	20.2%

Orchardists will note that, in spite of all the high-priced White Oil Emulsions and Arsenate of Lead powder, "Elephant" Brand Arsenate of Lead Paste gave the highest percentage of clean fruit at the lowest cost per application.

Orchardists Will Notice—

Cost of Spraying much less than any other Brand. Largest Percentage of Clean Fruit.

PRICE IS COMPETITIVE — QUALITY STANDS ALONE

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"EMPIRE STOCKTAKING."

Valuable Book Just Published.

A VALUABLE NEW BOOK is just to hand from England. The title is "Empire Stocktaking," the author being Mr. L. St. Clare Grondona, a well-known publicist, who is personally familiar with Empire conditions. The theme is Empire stocktaking—truly a most important subject, and one which is of the greatest interest in Australia at the present time. Statistics, of course, are given prominent attention, but the presentation is interesting, and the reader's attention is captured all the time. The object of the writer is to set out clearly the outstanding facts of Imperial production and of Imperial demand. This should clarify our thinking and assist the effort being made to increase trade within the Empire. At the same time, the importance of trade with other countries is fully recognised. The whole range of goods is dealt with, manufactures as well as primary products.

Regarding Apples, the following is stated:—"About 100 Apples were eaten per head of the population in the United Kingdom in 1924, and out of these 38 were supplied by the United States, 25 grown in the U.K. itself, 19 from Canada, and 8 from Australia and N.Z.: the other 10 came from the Continent and the Channel Islands.

"Empire Stocktaking" contains no propaganda. It is a plain statement of facts, and should prove of help to business men, political workers, economists and educationists. The publishers are Simpkin, Marshall Ltd., Stationers' Hall Court, London, E.C.4. The published price is 10/6 per copy.

NEW ZEALAND.

Auckland.—There has been a remarkable expansion of the Auckland fruit trade during the past four years. The total shipments for the season just closed totalled 104,425 cases, comprising 102,020 cases of Apples and 2,405 cases of Pears. Last year 81,000 cases of fruit were exported.

Fruit was sent to the provincial pool from about 120 growers from all parts of the province, the supplies being fairly evenly distributed.

Shipments included 31 varieties of Apples and 10 classes of Pears, the lines of Apples being made up in the following order:—Delicious (comprising about half of the quota), Dougherty, Dunns, Gravenstein, and Granny Smith. There were only small stocks of other classes shipped. The principal varieties of Pears were: Packham's Triumph, P. Barry, Beurre Bosc and Keiffer.—"N.Z. Smallholder," July 16.

Cox's Orange Pippin Apples from New Zealand were popular in all British markets in the export season just closed.

EUROPEAN APPLE AND PEAR CROP.

The Apple and Pear crop on the Continent of Europe is expected to be definitely below average, and is considerably smaller than last year, states the U.S.A. Foreign Agricultural Service. Pear prospects are rather poor on the Continent, and the total crop is expected to be small, except in Holland and the Scandinavian countries.

SUGAR ENQUIRY.

THE Federal Cabinet has decided to appoint Mr. William Young, fruitgrower, of Toolamba West, Vic., to represent Australian fruitgrowers on the Sugar Enquiry Committee. Mr. Young has ably filled the position of President of the Ardmona Fruitgrowers' Association, the Northern Victoria Fruitgrowers' Association and the Australian Canning Fruit Growers' Association. He is a familiar figure at fruitgrowers' conferences.

Fruitgrowers and their associations are urged to give Mr. Young their best support. Evidence showing the adverse effect of the Sugar Agreement on the fruit industry should be tabulated and sent to Mr. Young at the earliest opportunity. The "Fruit World" and staff will do everything possible to be of service in this matter.—Editor, "Fruit World."

PERSONAL.

Mr. J. M. Balfour, Chairman Victorian Dried Fruits Board, has been elected Mayor of Brighton.

* * *

Mr. H. H. Smith, M.L.C., of Melbourne, now on a visit to England, reports unfavorably regarding the canned fruit Control Board's methods. His strictures were replied to but Mr. Smith has returned to the attack.

* * *

Mr. R. E. Downie (Gibbs, Bright & Co., Adelaide), called at Melbourne at the end of August on his way to Brisbane.

* * *

The staff of "The Fruit World" desire to congratulate the Editor and Mrs. R. E. Boardman on the birth of their fifth child—a daughter.

* * *

Mr. D. P. Murray (Gerrard Wire-Tying Machines Pty. Ltd.), has gone to Queensland for a health trip.

* * *

New South Wales.

The several members of the Morris family at Stanbridge, are to be congratulated on the first-rate quality of the Citrus fruit produced. Their groves are looking very well indeed.

* * *

At the Yanco Packing shed the management has been recently taken over by Mr. Bevan.

* * *

Victoria.

Harcourt.—After the pruning operations, growers have been filling in the wet days at the cool store, packing fruit for interstate and local markets, also filling private orders.

Harcourt growers have a big trade direct with country fruiterers and private buyers.

* * *

Mr. W. L. Gregory (Gerrard Wire Tying Machines Co.), who recently visited the Murrumbidgee Irrigation Areas reports that there are big crops of Citrus at Griffith and Leeton this season.

SULPHATE OF AMMONIA.

The "Port Auckland," due in Melbourne early in September, will carry 250 tons of sulphate of ammonia.

Fruitgrowers and fruitgrowers' associations are advised that prompt delivery can be given ex this shipment, and that the sulphate of ammonia will be guaranteed in a free-running condition.

For those who have not hitherto been advised, the price of sulphate of ammonia due to primage duty, is now £12/16/- per ton, less 2½ per cent. for cash with order, and fruitgrowers' associations can buy at this price, less a further 5 per cent., and in the event of ordering 50 tons for spread delivery a further 2½ per cent. will be granted.

Orders should be placed officially through fruitgrowers' associations or direct with the Metropolitan Gas Company, 196 Flinders-street, Melbourne.

VICTORIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at Melbourne on August 29, Mr. E. I. Lawford presiding. There were also present: Messrs. W. H. Carne, J. W. Bailey, W. A. Webb, C. M. Griffeth, G. W. Brown, H. Ford, K. Eagle, F. R. Mellor, F. Cave, A. S. Harrison. Apologies were received from Messrs. R. E. Fowler and J. B. Mills.

Stevedoring Charges.—Letter received from the Tasmanian State Fruit Advisory Board, stating that in Tasmania the cost of stevedoring in loading fruit consignments on overseas vessels is borne by the ship owner and paid for out of the freight rate of such consignments, namely 3/6 per case. It was decided on the motion of Messrs. Bailey and Brown, to write to the Overseas Shipping Representatives' Association, requesting similar arrangements for Victoria.

Australian Fruit Export Council.—As the Sub-Committee had been unable to meet it was decided to prepare a report for the Executive meeting, to be held in the morning of the day of the annual meeting. It was hoped to have Mr. Colombie's advice also.

Annual Meeting.—Decided that the annual meeting be held on Friday, September 26, at the Board Room, Temple Court, at 11 a.m. To request Mr. Slater, the Minister for Agriculture, to attend the Conference; Mr. Clapp to speak at the luncheon adjournment; Conference to resume at 2.30 p.m. (Executive meeting 9.30 the same morning.)

Primage and Sales Tax.—Letter received stating that all fresh fruit was exempt from the Sales Tax, so also are the boxes or containers for the packing of same. All dried fruits were also exempt under special provision. The tax would have to be paid on canned fruit and jam fruit containers.

Softwood Shooks.—Mr. C. H. Tutton wrote suggesting that a deputation await on Mr. Fenton (Minister for Customs) requesting that shooks for Apple boxes be permitted entry under 404 10 per cent. ad val., this privilege was already extended to the dried fruits industry and would in no way interfere with local manufacturing interests. It was decided on the motion of Messrs. Mellor and Cave, to write to the Tasmanian State Fruit Advisory Board and the South Australian Fruit Marketing Association, asking if they would be agreeable to attend a deputation to the Minister on this subject, the deputation to be arranged as soon as possible after the return of Mr. Colombie.

Trade with the East.—The Secretary reported that the Emergency Committee had also dealt with a letter from the Markets Department, advising that an important conference of all interested in developing trade with the East, would be held in Sydney on August 11. A report was received from Mr. J. B. Mills, who attended the conference on behalf of the Association.

Mr. Mills stated the conference was thoroughly representative, and it was hoped that as a result many disabilities in the way of increasing trade with the East would be done away with. Apples were bringing 8/- to 10/- per case, but the high charges for freight and transhipment made this unprofitable. A reduction of freight was contemplated, also reciprocal trade agreements. The conference recommended the appointment of two Trade Commissioners, one at Shanghai, the other at Singapore. The report was received. It was decided to accord a vote of thanks to Mr. Mills for his attention.

Finance.—A financial statement was submitted showing a credit balance of £287/9/5.

The Apple Industry of Australia.

History ∴ Statistics ∴ Soils ∴ Stocks ∴ Pest Control ∴ Scientific Research

The "Canadian" Standard Case, 18 in. x 11¼ in. x 10¼ in. is Recommended.

"Problems can be overcome by the organised efforts of those interested in the production and sale of fruit."

A paper read by **J. M. Ward, Superintendent of Horticulture, Vic., before the Australian Conference of Fruitgrowers, Hobart.**

Historical.

IN REVIEWING the historical side of the Apple industry of Australia, one must first start with the history of Australia, for on the day of his arrival, Governor Arthur Phillip ordered land to be cleared around his residence for the purpose of receiving the plants brought by the fleet from Rio Janiero and the Cape of Good Hope. The plants were then brought on shore and in a short time every eye was gratified with seeing the Fig, Orange, Pear, Grape and Apple take root in New South Wales.

Probably the commencement of the industry in Tasmania was the planting of some Apple trees at Adventure Bay, Bruni Island, Tasmania, by Lieut. Bligh, in 1792. At a later period it appears that Lady Franklin, wife of the then Governor of Tasmania, imported some Apple trees from England about the year 1838 or 1839, and had them planted alongside a creek at York Town; most of these trees are still living, and although neglected for many years, are still thriving and yielding, under the circumstances, good crops of fruit. I am unable to give the names of all the varieties, but know from personal observation that there are Alfristons and Stone Pippins among them.

To the Huon Valley, in Southern Tasmania, must be given the credit of establishing and maintaining the oldest commercial orchards in Australia.

From what can be gathered, the first Apple trees of the Huon were planted in 1843 by the late Thomas Judd, whose example was followed by the late Silas Parson, at the Grove; others who planted during the 40's and 50's of the 19th century along, or near the banks of the Huon River, were the late William Barnett, of Franklin; the trees in this orchard are still producing splendid crops (up to 20 bushels per tree) and the property is now owned and occupied by his grandson, that well-known orchardist, Mr. N. B. Barnett. Then there was the late William Cuthbert, the late Mr. Coleman, the Pages, and a number of other early Apple pioneers, whose descendants are still growing Apples in Huon district to-day.

Further down the river, at Geeveston, the late William Geeves planted some Apple trees in the year 1857, and this property is now occupied by Mr. R. Geeves. The varieties planted by these early pioneers included Windsor Pippin, Ribston Pippin, Scarlet Nonpariel—better known in Tasmania as Scarlet Pearmain—Reinette du Canada (called Blenheim Orange in Tasmania), French Crab, Stone Pippin, Mobb's Codling, Alfriston, Dumelow's Seedling (Wellington), Gooseberry Pippin, Sturmer, and other old-English varieties.

It is understood that the trees of the early plantings were imported from England. Other Tasmanian districts, such as the Kangaroo and Derwent Valleys, Lilydale and Glenorchy, followed the lead given by the Huon; and in later years plantings were extended to other parts including Tamar and Mersey Valleys, the Channel, Peninsula and other districts. Most of the trees planted in the early commercial orchards are still flourishing and yielding excellent crops, and Apples from these old trees are still being exported to the United Kingdom and Continental markets.

Victoria followed Tasmania's lead in the planting of commercial Apple orchards. Probably the Henty family, who went over from Tasmania and settled at Portland, Victoria in 1835, were the first to plant Apple trees in Victoria. One of the varieties planted was known as "Lawrence's Pet" (this is probably St. Lawrence). From information received it appears that one of the earliest Victorian orchards was planted by the late Mr. Thomas C. Cole, about the year 1845, on the banks of the Yarra at Hawthorn, some four or five miles from the Melbourne G.P.O. But owing to the spread of the city this orchard has been out of existence for very many years.

The late Mr. James Lang planted an orchard at Harcourt in the year 1863; many of these trees are still thriving, and the orchard is now in the possession of his son, Mr. J. H. Lang. About the same time Mr. Robt. Whatmough established his orchard in the Heidelberg and Greensborough districts. The varieties of the early Victorian orchards were practically the same as those planted in Tasmania, and no doubt the first trees were imported from England. Gradually Victorian Apple districts sprang up in different parts of the State, north, south, east and west.

Apple orchards were not planted to any extent in New South Wales in the early days of the settlement of that State; but a number of orchards later on sprang up in the coastal districts in the vicinity of Sydney, which produced early maturing varieties. New South Wales has to a large extent looked to Tasmania and Victoria for its Apple requirements. In later years commercial Apple districts in the Mother State, extended to a number of localities in different parts of that State, north, south and west of Sydney; and the Murrumbidgee irrigation districts, as well as non-irrigated districts in New South Wales, are now producing high-grade Apples.

In Queensland, practically the only Apple areas are in the Stanthorpe district, which is in the south-eastern part of that State, at an altitude of some 3,000 feet above sea level, and certain varieties of Apples produced in this district, such as Jonathans, Gravenstein, Granny Smith and Delicious, are equal to those produced in any other part of Australia.

One or two small Apple orchards have been planted in the Herberton district, which is the far north of Queensland, some 70 to 80 miles from the coast, and approximately 3,000 feet above sea level. Owing to the unsuitable climatic conditions, good quality Apples cannot be produced in the Herberton district.

I am not aware of the early planting in South Australia; but the majority of the Apples in this State are produced in the vicinity of Adelaide, in the hill country, others are within a radius of 50 to 60 miles of the metropolis.

The last State to come into the picture as a producer of Apples is Western Australia, which has only been growing this fruit on a commercial scale for some 20 to 25 years, and more particularly during the last 15 to 20 years. As an Apple exporting State, Western Australia has come to the forefront very quickly, and their Apples are probably more favorably known in England than those from any other State, chiefly, no doubt, on account of the West having nothing to forget, they profited by the experience of growers in other States, and started on the right lines, planting those shipping varieties most favored in Great Britain, and grading and packing their fruit in the most approved manner.

SOIL.—Apple trees have been planted on many types of soil in the different States. Some years ago there was a mistaken idea that any class of poor soil was good enough for an Apple orchard; in fact, a number of people considered that a poor soil was the most desirable; the speaker, however, did not belong to this school of thought and never favored the planting of Apple trees for commercial purposes an anything but good soil. The early pioneers for the most part selected excellent soil for their orchards, and their judgment has proved correct, for it is an outstanding fact that those old orchards of 50, 60 and 70 years old, that are yielding such splendid crops to-day, are on good types of soil.

It is a well-known fact that really good quality Apples are produced in the poorest of soils, but unfortunately only a very limited quantity is produced per tree or per acre and thus are not profitable to the owner.

The best Huon orchards and the most productive orchards in Australia are those on a really good type of soil. Bacchus Marsh, in Victoria (which is an alluvial soil of great depth), Geeveston, Castle Forbes, and the alluvial flats in some parts of the Huon district are outstanding examples of planting Apple trees in good soils. Similar examples in other States, America and New Zealand could also be cited.

The Apple orchard that yields below an average crop of less than 300 bushels per acre is hardly a payable proposition in these times of high cost of production. Orchards in the districts quoted have for years past yielded, and are still producing from 1,000 to 1,200 cases per acre.

STOCKS.—The trees of early orchards of Australia and the majority of the orchards in Tasmania were worked on to what is termed the seedling or free stock, but some 40 years ago a decided turn—more particularly in the mainland States—was taken against the use of this stock on account of its being subject to attacks of woolly aphis, and the use of Northern Spy, stock vegetatively propagated, was favored by mainland nurserymen, which gave them an opportunity of sending from their nurseries, young trees with roots free of aphis (the Spy is highly resistant to the pest). These trees were eagerly sought by new planters.

Prior to the advent of what is termed "blight-proof" stock, there existed a number of small seedling stock nurseries in the Huon and Glenorchy districts, sufficient to supply the needs of Tasmanian planters. The placing of the so-called "blight-proof" trees upon the market resulted in these small nurseries going out of existence, and growers made their purchases from mainland nurseries. Years later, a number of orchardists became dissatisfied with the growth and production of these trees, and a demand was made for trees worked upon seedling stock, so a number of nurseries again became established in the Huon to meet the new demand. The introduction of the woolly aphis parasite (Aphelinus mali) has put another complexion upon the Apple stock question. Nevertheless all thinking persons interested in this subject realise that a considerable amount of research work is much needed on the fruit tree stock question. In this respect excellent work has been done at the East Malling Research Station, England, and at least three of the Agricultural Departments in Australia have imported a number of Apple tree stocks from East Malling, with a view to trying these out under Australian conditions. The stocks imported by Victoria are as follow:—

Very dwarfing stocks—Jaune de Metz, Paradise No. IX.
Semi-dwarfing stocks—Doucin No. II.
Vigorous stocks—Broadleaved English No. 1.
Very vigorous stocks—Malling Nos. XII., XIII., XV., XVI.

ORCHARD PESTS.—As is well known, the Apple grower has many orchard pests to contend with. These, in the main, are insects and fungi. Some States have more to contend with than others. For instance, the chief troubles in the Tasmanian orchards are black spot (Venturia inequalis), powdery mildew, codlin moth and mussel scale. In Victoria, we have as our foremost pest, the codlin moth, then come black spot and root borer; we also have to a very minor extent in one or two districts, San Jose scale, which is kept well under control.

South Australia and New South Wales have the same main pests as Victoria, whilst in Queensland, codlin moth and Queensland fruit fly are the worst pests, black spot being conspicuous by its absence.

Western Australia is more fortunate than its sister States in having neither codin moth nor black spot. The Apple districts in all States also have minor pests, such as woolly aphis—which, before the introduction of Aphelinus mali, was one of the chief insect pests—Armillaria mellea, or root rot-fungus (worse in some districts than others), scale insects and various fungi.

A great deal of research work is needed into the control of orchard pests at the lowest possible cost to the grower. If, for instance, we had some biological control of codlin moth and fruit fly, the cost of production would be considerably lessened, and the yield of marketable fruit greatly increased. Greater research work by scientifically trained men will be hastened when organised Apple growers demand it.

AREA UNDER APPLES AND PRODUCTION.

The area under Apples in the various States of the Commonwealth during 1927-28, was 98,235 acres, and the production, 11,504,639 bushels, made up as follows:—

State.	Area. Acres.	Production. Bushels.
New South Wales	14,522	1,254,074
Victoria	32,482	3.712.350
Queensland	4,158	103,893
South Australia	10,359	1,352,264
Western Australia	10,044	409.058
Tasmania	26,670	4,673,000
	98,235	11,504,639

Ten years ago (1919-20), the area under Apples in the various States was 83,273, and the production, 6,247,659 bushels; the details are:—

State.	Area. Acres.	Production. Bushels.
New South Wales	8,664	524,253
Victoria	30,992	2,227,317
Queensland	1,901	68,477
South Australia	8,673	445,916
Tasmania	25,079	2,351,939
Western Australia	7,964	629,757
	83,273	6,247,659

Seventeen years ago (1912-13) the area under Apples in the various States was 65,301 acres, and the production, 4,692,569 bushels. The details are as follow:—

State.	Area. Acres.	Production. Bushels.
New South Wales	6,507	548,801
Victoria	22,143	2,036,756
Queensland	627	15,904
South Australia	6,501	448,468
Western Australia	5,153	311,316
Tasmania	24,370	1,331,324
	65,301	4,692,569

APPLES—Area, Production, and Export Overseas—
Various States of the Commonwealth.

Area.

State.	1923-24 Acres.	1924-25. Acres.	1925-26. Acres.	1926-27. Acres.	1927-28. Acres.
N.S.W.	13,483	12,557	13,925	14,082	14.522
Victoria	34.923	34,922	32.886	33,314	32.482
Queensland	3,908	4,359	4,360	4,203	4,158
S.A.	10,910	10,813	10,528	10,487	10,359
W.A.	9,672	9,517	9,751	9,893	10.044
Tasmania	27,191	27,010	26,927	26,338	26,670
	100,087	99,178	98,377	98,317	98,235

EXPORT.—In 1886, a shipment of 658 cases of fruit, about 25 tons, which included a considerable number of Apples, was sent from Victoria to England, the Apples arriving in excellent condition.

In the export of Apples to the United Kingdom, pride of place must be given to Tasmania in pioneering the export trade; and in this respect a great deal of credit is given to the late Mr. W. D. Peacock, of Hobart, together with Messrs. W. E. and L. M. Shoobridge, as well as a number of Huon growers in initiating Apple shipments from Tasmania in the year 1887 or 1888.

Mr. James Lang, of Victoria, shipped a commercial consignment without refrigeration, to England in 1888. It is on record that as far back as 1873 Victoria shipped a few bushels of Apples overseas, to the Vienna Exhibition in Austria; and in 1875 a further consignment was sent to the Botanical Conference at Florence in Italy. In 1876 Victoria shipped 80 cases to the East; and in 1880, 13 bushels to England. When Apples were first shipped to Great Britain, they were packed in a case having the inside measurements, 28 in. x 7 in. x 14 in. This case was shipped for a number of years. About the year 1898, a case known for some time as the "Peacock" was introduced by the late Mr. W. D. Peacock, to take the place of the unsuitable long narrow case previously used. The "Peacock" case is the one now known as the "dump" case (18 in. x 8-2/3rd in. x 14¼ in. inside measurements), and which has been used so much in Australia and for export purposes. Another shaped case is now coming into general use; this is known as the "Canadian Standard" case (18 in. x 11½ in. x 10½ in. inside measurements), and so far, this case appears to be the most suitable of all, and is the only Apple case used by U.S.A., Canada, New Zealand, and the South American Apple-growing countries.

As can be seen by the figures supplied, Tasmania is the greatest Apple producing State, with Victoria as runners-up.

Owing to the fact that Victoria has such a good home

Production.

State.	1924-25. Bushels.	1925-26. Bushels.	1926-27. Bushels.	1927-27. Bushels.	1928-29. Bushels.	Average, 5 years. Bushels.
Victoria	2,233,230	2,063,214	543,106	3,712,350	626,294	1,835,638
N.S.W.	841,429	758,742	407,868	1,254,074	639,720	780,366
Queensland	98,644	130,369	113,810	103,893	183,461	126,035
South Australia	597,375	882,064	361,712	1,352,264	446,878	728,058
Western Australia	656,881	524,391	901,464	409,058	1,122,713	722,901
Tasmania	2,210,000	4,132,000	2,900,000	4,673,000	2,500,000	3,283,000
Totals	6,637,559	8,490,780	5,227,960	11,504,639	5,519,066	

Exports Overseas.

State.	1924-25. Bushels.	1925-26. Bushels.	1926-27. Bushels.	1927-28. Bushels.	1928-29. Bushels.	Average, 5 years. Bushels.
Victoria	454,149	453,744	11,727	927,615	14,408	372,328
N.S.W.	32,325	22,287	7,767	53,362	20,522	27,252
Queensland	—	—	—	—	—	—
South Australia	33,290	329,486	6,452	496,685	9,863	175,155
Western Australia	347,342	298,379	494,641	169,237	654,982	392,916
Tasmania	1,331,000	2,115,000	1,068,677	2,716,435	912,145	1,628,651
Totals	2,198,106	3,218,896	1,589,264	4,363,334	1,611,920	

market there is not the necessity to export such large quantities as Tasmania exports. The average price of a case of Apples delivered to the sale room in England is approximately 10/-, and the cost of delivering same is practically 6/- per case, made up as follows:—

Apples.	Per Case. s.	d.
Steamer freight	3	6
Insurance, B/L, Stevedoring, Coopering, Duty Stamps	0	4¼
Forwarding	0	3
Handling Charges, London*	1	2
Brokerage	0	9
Exchange (1d. to 1½d.)	0	1
Advertising	0	0½
London	6	1¾
Other Ports	5	11¾

*2d. less for other ports.

On top of this amount has to be added the cost of case, wrapping paper, branding or labelling, freight or cartage to the ship's side, and other incidentals, which can be put down at not less than 2/-, making a total of 8/- from the packing house to the selling floor in England, leaving the grower only 2/- per case for the cost of production. It costs approximately 3/6 to produce a case of Apples. The grower should receive a higher average price per case on the London or European market, or a satisfactory price on the Australian market, to make Apple growing a payable proposition.

It is often stated that Apple growing pays everybody but the man who produces them; on these figures, it certainly looks like it. Unfortunately there are too many low-grade varieties produced and shipped; and it is the low-grade kinds that help to reduce the price of the better class varieties. Another matter that requires attention is the elimination of so many brands. District brands are required rather than so many individual ones.

Cool Storage in Australia.

The space available in Australia for fruit cool storage, is in the vicinity of 3,000,000 cases. Victoria leads in both the number of cool stores, viz., 68 (1 Government, 25 co-operative and proprietary, 42 private), and capacity, 1,466,317 cases.

PRODUCTION IN OTHER COUNTRIES.

It may be interesting to quote the production and imports of Apples in other countries, and the quantity of Apples exported from Australia to those countries which import this fruit.

Principal Countries Producing Apples.

Country.	Annual Production (Bushels).
U.S.A.	202,842,000
France	165,465,040
Austria (including Pears)	31,490,570
Czecho Slovakia	15,850,000
Italy (including Pears)	13,650,000
Canada	13,479,549
England and Wales	11,600,000
Spain	8,800,000
Yugo Slavia	8,600,000

Chief Countries Importing Apples.

Country.	Annual Imports (bushels) approx.
Great Britain	27,000,000
Germany	12,301,315
Canada	391,386
U.S.A.	133,409
Brazil	62,829
New Zealand	40,390
Argentine	23,226
Fresh Fruit—Apples not shown separately.	
China	823,116
Straits Settlements	170,388
India and Ceylon	53,203
Java and Madura	50,879

Export of Apples from Australia and Destinations.

Destination.	1925-26. Cases.	1926-27. Cases.
United Kingdom	3,001,257	1,259,890
Ceylon	15,092	11,647
Hong Kong	372	262
India	757	1,017
Malaya (British)	26,100	22,667
New Zealand	—	292
Pacific Islands	1,475	1,490
Papua	395	425
South Africa	5,440	1,655
Other British Countries	120	67
Belgium	4,840	85
Denmark	14,007	2,932
Egypt	11,925	6,525
France	5	307
Germany	136,310	205,525
Netherlands East Indies	19,037	23,272
Norway	695	13,042
Siam	100	142
Sweden	4,935	27,480
Other Foreign Countries	85	42
Approximately	3,242,947	1,578,764

I have no doubt that with a proper All-Australian Apple Organisation, coupled with improved grading and packing of good varieties, the export of larger quantities of Apples could be extended to many of the countries mentioned, although in this respect Victoria, in 1928, shipped Apples to 24 ports in various parts of the world.

We should also concentrate on producing earlier maturing good shipping varieties, with a view to shipping a week or two earlier than we do. The Apples in the early boats usually bring fairly good prices, yet many of these Apples are not as sufficiently mature nor colored as we would like them to be.

Many of the Apple growers' problems can be overcome by organised effort on the part of all those interested in the production and sale of fruit.

CANADIAN TRADE IN THE EAST.

With a view to the development of Canadian trade in the East, the Dominion Chamber of Commerce has arranged for the despatch of a trade mission to China and Japan. The party will leave Vancouver on October 16, 1930.

Financial Advances.—Specialty Investments Pty. Ltd., of 89 Collins-street, Melbourne, advise that they are prepared to make advances to orchardists of amounts ranging from £25 to £250.

During 1929 over 200 transactions of this nature were conducted by Specialty Investments Pty. Ltd., ranging in amounts from £30 to £300, and for practically every purpose. This company advances money to assist producers over difficult periods, and are satisfied with a reasonable remuneration for their services. Further particulars may be obtained from their advertisement in this issue.

Citrus News and Notes.

FEDERAL CITRUS COUNCIL.

Australian Trade With New Zealand.

"New Zealand Keen to Do Business With Australia."

Interesting Report by Mr. J. A. Parkes.

AT a meeting of the Federal Citrus Council of Australia held on August 5 and 6, the report of the itinerary of the Secretary of the Council in New Zealand was submitted. The object of the visit was to determine whether any of the trade in citrus fruits now in the hands of California could be diverted to Australia.

Citrus imports to New Zealand from all sources and from Australia from 1926 are as follows:—

Oranges.

Year.	From all Sources.	From Australia.
1926	108,085	84,691
1927	121,113	41,873
1928	148,792	93,630

Lemons.

Year.	From all Sources.	From Australia.
1926	28,836	10,044
1927	27,832	4,745
1928	38,082	7,139

Oranges and Lemons from all sources, 11 months, 1929—156,972 cases.

The exporting countries were chiefly the U.S.A., in 1928 the total being 48,190, Australia 93,630, and Palestine 4,745, being the next largest shipper. Mandarins and Grapefruit, 40,656 cases, of which Australia contributed 36,262, the U.S.A. 2,769, and Fiji 1,625. Lemons, the U.S.A. 19,540, Australia 7,139, Italy 1,350, Norfolk Island 53. Besides the above, the whole of the production of the Cook Islands, New Zealand mandated territory, is marketed in New Zealand, the quantities ranging from 150,000 to 200,000 annually.

Unfortunately from the Australian standpoint the export of navels to New Zealand finishes about the end of September, and to displace California it would be necessary to have supplies for New Zealand run into December and January. On the other hand, shipments of Late Valencias can be made at the time the Californian navels are being forwarded to New Zealand.

There was a keen desire on the part of merchants in New Zealand to do business with Australia in preference to the U.S.A., and special efforts will be made by the affiliated citrus States to give the Islands a continuity of supply so long as the fruit is available. There is quite a good opening for Lemons in New Zealand, but this fruit, being subject to 1d. per lb. duty, has the effect of restricting consignments from Australia. Although Orange production in New Zealand is practically negligible, over 20,000 cases of Lemons are grown. The average consumption per head of population for the whole of New Zealand in Oranges amounts to 10.58 lbs. and for Lemons 1.71, the latter being used mostly in the winter time as a cold or influenza preventive rather than as a summer drink.

The report stated that there was lack of co-ordination in Australia in connection with shipments to New Zealand, both the North and South Islands being largely overstocked, meaning low prices to the consignors. An effort will be made to alter these conditions, as it is essential that co-ordination between the exporting States must be obtained if any beneficial results are to accrue in the export of citrus to New Zealand. The question of the appointment of a market representative to watch the interests of the affiliated States has been deferred pending an attempt to co-ordinate supplies this end.

No Sales Tax on Fruit Cases.

The Council forwarded a telegram of protest to the Minister for Markets against the imposition of a sales tax on fruit cases, pointing out that this would be an additional handicap to the grower in his attempt to reduce his production costs. To-day a telegram has been received indicating that the sales tax will not apply to boxes, cases and crates used in marketing primary products, such as fruit. This action will afford a large measure of relief to citrus growers, who are this year being faced with problems such as have never previously confronted them, such as crop above the normal with lower prices ruling than for many years past. In many instances no profit will be made, and in some cases it is anticipated that growers will not receive production costs.

Mr. Gerald Mussen Appreciated.

The Council took the opportunity of expressing appreciation of the services rendered by Mr. Gerald Mussen to the citrus industry over a period of years. Mr. Mussen was the first Victorian member to represent Victorian growers on the Council, and has just recently retired from the position of Director of the Victorian Central Citrus Association.

Victoria.

CITRUS GROWING AT MURRABIT.

THE CITRUS CROPS in the Murrabit district are good, being larger than last year. The fruit is of high quality, and there has been no frost damage. The citrus is later than usual in ripening, this being especially noticeable with Mandarins.

Writing under date August 18, Mr. Dudley J. Walters, managing director, Murrabit Packing Co. Pty. Ltd., states that so far light rains have been received. A good general downpour of over an inch would be appreciated.

Cover crops have been generally planted, and are showing good growth. Growers are now starting ploughing and manuring, mainly with Calnitro and nitrate of lime. All groves are looking exceptionally well, there having been a big growth during the autumn. A fair amount of young citrus is being planted.

Murrabit Packing Shed.

The accounts which were made up for the year ending March 31 showed successful operations both with the quantity packed—32,500 cases—and the prices received.

The trading department also showed a large turnover, and a satisfactory profit. This company is now on a sound financial basis. A substantial sum has been placed to reserve, and all assets have had their proper amount of depreciation written off. During the first three months of the present year's business the turnover in the trading department has more than doubled. This department is increasing very rapidly.

Alterations and additions have been made to the packing plant, and this is now deemed to be one of the most up-to-date and efficient in Victoria. A gas chamber was installed and after testing, was found to be thoroughly reliable.

The directors appreciate the loyalty of growers. They are also convinced of the necessity for shed packing. The public is becoming discriminating. They now buy recognised brands and were prepared to pay higher prices for same. The day of the recognised shed pack has undoubtedly arrived, and the demand for shed packs is growing and will continue to grow.

The Murrabit shed has a capacity for handling 1,000 cases per day, and it is expected this figure will be reached during the present season. The average, however, will probably turn out about 6 or 700 per day. The season should be in full swing about the first week in September.

NANNEELLA.

THE NANNEELLA DISTRICT, although not so largely planted with citrus, as some of the fruitgrowing areas of the State, is rapidly coming to the front for the production of high quality Oranges and Lemons.

The growers have combined in a manner which is probably unique. Absolutely every grower of citrus in the district is a member of the local Citrus Association, which, as a result, is in a very sound financial position.

Although only in existence for a period of three years, the Association has already purchased fumigation sheets, and it is intended to carry out any fumigation work needed by the growers.

While the local aspect of citrus production is satisfactory, drainage having checked the seepage troubles which are so apparent in other districts, it cannot be said that growers are satisfied with the market prospects.

The district will have a production in the near future of over 25,000 cases, and it is very evident that, with other citrus producing areas rapidly increasing production, an outlet overseas must be obtained.

The recent attempt to capture the New Zealand market, while praiseworthy, no doubt, is useless to relieve the position, as the absorption possibilities of New Zealand are limited.

Export to Great Britain

and Europe should be begun without delay. There is still time for several shipments this season, and even if the profits were not large, these would help to relieve the Melbourne market.

There must be many growers and packing sheds who would venture a reasonable quota towards the shipments, more particularly as the Melbourne market for Oranges is at present unprofitable.

Growers in this district are satisfied that it only requires systematic export on a large scale to put the future of the citrus industry on a profitable basis.

NEW GRAPEFRUIT.

THE CITRUS BUD SELECTION COMMITTEE in N.S.W. is doing good work. The members of the Committee are Messrs. C. Rosen, H. S. Robinson, W. Barrett, and R. J. Benton.

A new Grapefruit in Mr. R. E. Peck's orchard, Kurrajong, N.S.W., is under favorable observation.

NEW SOUTH WALES.

An enquiry is being conducted in N.S.W. into the fruitgrowing industry by the Home Maintenance Area Board. Soldier settlers at Young were recently examined. Mr. Albert Smith, inspector of the Soldier Settlements, stated that 15 acres was all a man could properly work.

Exanthema of Citrus.

Effect of Bluestone Soil Treatment.

EXCEPT IN THE CASE OF MANDARINS, for which the soil treatment has been found the more effective, either of two methods is recommended by the N.S.W. Department of Agriculture for the control of exanthema of citrus trees—(1) spraying with Bordeaux mixture 6-4-100 with the addition of spraying oil at the rate of 1 gallon per 100 gallons of spray, or (2) application of bluestone (copper sulphate) to the soil in quantity according to the age of the tree. If any preference is to be given as to period of application, the spray should be applied at the full blossom stage (in October), and the first dressing of bluestone, which is best given in a series of small applications, in the late winter or early spring, just before the flush of growth.

Spraying with Bordeaux has not given as good results with Mandarins as with other types of citrus, and growers are recommended to use the soil treatment. Reports of defoliation in some cases following he adoption of this method are commented on as follows by the Biologist of the Department:—

"Although defoliation may occasionally result, this treatment is quite satisfactory under normal seasonal conditions. The factor governing such risk as attaches to it is the degree of concentration in which the bluestone becomes available to the roots of the tree, and this depends upon the amount of moisture in the soil. Heavy applications of bluestone may have no effect under very wet conditions, while the moisture conditions may on the other hand be such that lighter applications are followed by injury. Both rainfall and evaporation will influence the effect of an application, and upon these influences will depend whether the bluestone is made available in a weak solution, which is readily taken up by the roots of the tree, or in a solution so concentrated as to be harmful. As the orchardist has no control over these factors, it is difficult to lay down any hard and fast rule as to safe and unsafe periods of application, and the aim should be, within the limits consistent with efficacy, to reduce as far as practicable the chance of detrimental accumulation in the vicinity of the roots. With this object the total amount required for the tree (4 lb. for trees up to 6 or 8 years old and up to 8 lb. for older trees) should be given in a series of, say, four applications, with an interval of three months between each. If this plan is followed there will be little danger of defoliation."

Soil treatment with bluestone is not only effective, but has the advantage of being easily applied. Where scab or melanose is also present, however, Bordeaux mixture should be applied at time of blossoming, as it is an effective spray for all three diseases.

Victoria.

Tongala.

Mr. Geoff. V. Wood, Hon. Secretary Tongala Citrus Association, writes as follows under date August 20:—The season is a late one, and so far we have not really started marketing.

Lemons are of particularly good quality, an abundance of rain and no frosts ensuring good firm, juicy fruit.

Orange prices are very disappointing, but we hope to catch a better market in September and October with the bulk of our crop.

Codlin Moth Control.

Valuable Experiments in Tasmania.

(By P. H. Thomas, T. D. Raphael, and H. A. Turner, Tasmanian Department of Agriculture.)

A SERIES OF EXPERIMENTS designed to test out the efficacy of summer oils (either alone or in combination with arsenate of lead) as a control for codlin moth (Carpocapsa pomonella) were conducted during the past season in the following districts:—

Bagdad.—C. Graves—Jonathans.
Franklin.—Clarke Bros.—Scarlets, Ribston, Sturmer.
Youngtown.—W. H. Scott, Jonathans.

The areas selected had been rather badly infested in previous seasons, but in spite of the lighter infestation this year throughout the State and the later appearance of the moths, satisfactory results were obtained.

Four sprayings were found necessary in the South and three in the North, these taking place at fortnightly intervals commencing at the calyx stage (end of October) and finishing on January 16.

Four treatments were adopted:—

1. Summer oil, 1-50—Youngtown.
   Summer oil, 1-80—Bagdad and Franklin.
2. Arsenate of lead powder, 1-25.
3. Arsenate of lead powder, 1-25.—First spray.
   Summer oil, 1-50—Youngtown, 1-80 Bagdad and Franklin—later sprays.
4. Arsenate of lead powder (1-25) and summer oil (1-80) in combination.

Close examination of the fruits on the trees commenced on January 16, and continued periodically until harvesting, when the final figures were obtained.

Table 1.—Youngtown Plot (Jonathans).

	Treatment.	No. Apples	Infested Fruit.	% Infested.
C	No spray	750	141	21.70
1	Summer oil only ..	1,191	68	5.71
2	Arsenate of lead only	1,395	28	2.00
3	Arsenate of lead, followed by summer oil	1,505	16	1.06
4	Arsenate of lead in combination with summer oil	1,464	18	1.23

Three applications of each treatment.

Table 2.—Bagdad Plot (Jonathan).

	Treatment.	No. Apples	Infested Fruit.	% Infested.
1	Summer oil only ..	2,583	31	1,20
2	Arsenate of lead only	2,734	25	.91
3	Arsenate of lead, followed by summer oil	3,164	28	.88
4	Arsenate of lead and summer oil in combination	2,748	9	.33

Four applications of each treatment.

In the above tables the results of the various sprays in the three localities are set out. It was decided to count, on each examination, only those Apples into which the young codlin grub had actually penetrated, as a better measure of the value of the sprays could thus be obtained.

Results.

1. Summer Oil.—There is no doubt that this emulsion by itself exercised some control of the codlin moth. This can be seen from the results obtained at the Youngtown plot (table 1), where a strength of 1-50 was applied, and an unsprayed control retained for a period (sprayed eventually with arsenate, owing to wholesole infestation). Nevertheless, the results on the other plots (tables 2 and 3) will serve to show that this control is far from adequate, infestations ranging up to 16 per cent. under such treatments.

2. Arsenate of Lead followed by Summer Oils.—This treatment was only moderately successful, and in the Franklin plot up to 5 per cent. grubby Apples were harvested. Apparently the oil, whilst reducing the infestation, due to its ovicidal or deterrent properties, was not sufficiently effective in the later stages.

3. Arsenate of Lead—Summer Oil Combination.—Throughout the plots during the past season this mixture proved very satisfactory, practically eliminating the codlin moth where applied. From observations made it would appear that the oil served to spread the arsenate of lead lightly and uniformly over the leaves and fruit, thus giving a protective poisonous coating wherever the grub chanced to strike. In the present experiment and under the conditions experienced in the past season, the lead-summer oil combination gave the best results in the control of this pest.

General Observations.

Last year summer oils were extensively tested out in the control of red spider, and observations were continued in the experiment under discussion. At strengths of 1-50 to 1-80 only the younger insects were killed. No extensive infestations of red spider were experienced on the plots, so accurate data could not be obtained. From observations, however, it would seem that oil alone cannot be relied upon to entirely control summer infestations by red spider, lime sulphur flour paste being more efficient in this respect.

In the present season no damage to fruit or foliage was experienced where summer oil was applied at the recommended strengths; on the contrary, trees receiving such applications had a healthy appearance, and the fruit was singularly bright. An early leaf fall, however, occurred where arsenate of lead powder was applied at the rate of 1 lb. to 25 gallons.

Table 3.—Franklin Plot.

	Treatment.	Ribston.		Scarlet.		Sturmer.	
		No. Apples.	% Infested.	No. Apples.	% Infested.	No. Apples.	% Infested.
1.	Summer oil only	1,336	7.11	247	16.20	1,194	16.50
2.	Arsenate of lead only	1,627	1.78	501	3.40	1,429	.84
3.	Arsenate of lead, followed by summer soil	1,066	3.38	564	4.61	1,474	2.00
4.	Arsenate of lead and summer oil in combination	803	.50	531	.20	1,218	.41

Four applications of each treatment.

The appearance of codlin moth, as already mentioned, was somewhat later than usual, and in the plots, the largest number of affected Apples were found towards the end of February and early March. Strikes at this period were chiefly on the side of the Apple, whilst earlier the majority of the grubs entered at the calyx.

The experiment as a whole has demonstrated conclusively that the spreading and adhesive properties of the oil greatly add to the efficiency of the arsenate of lead. "Fluxit," a new commercial spreader for arsenate of lead, was also tried out successfully at Franklin, and gave a good control, the cover being very similar to that experienced with the use of oil.

The foregoing experiments were carried out with the co-operation and assistance of Messrs. C. Graves, Bagdad; Clarke Bros., Franklin; and W. H. Scott, Youngtown; in conjunction with officers of the Horticultural Division of the Department of Agriculture.

BLACK SPOT.

Excellent Control in Apples by Spraying.

A PRELIMINARY report of experiments carried out by the N.S.W. Department of Agriculture indicate that almost complete control of black spot of Apples is possible by means of the recommended spraying programme. The experiments have been conducted for five consecutive seasons in co-operation with growers in the Penrose and Batlow districts. At Penrose the best control of the series was obtained by applying Bordeaux mixture (6-4-50) at spur-burst, and lime sulphur (1-35, 26 deg. B.) at the calyx stage. Pinking stage sprays were omitted. The percentage of clean fruit in this series was 78.84, with an average of 24.91 per cent. of clean fruit on the unsprayed trees.

Much better results were obtained at Batlow, however, by use of the following spray programme:—

Bordeaux mixture (6-4-40) at spur-burst stage; lime-sulphur (1-14, 26 deg. B.) at pink stage; lime-sulphur (1-35, 26 deg. B.) at calyx stage.

This treatment gave 98.49 per cent. of clean fruit, whereas only 39.02 per cent. of clean fruit was produced on the unsprayed trees.

The programme is strongly recommended for the control of black spot in districts liable to infection.—"Farmer and Settler."

AMERICAN LOW-GRADE APPLES.

Britain Prohibits Entry.

The British Government has decided to prohibit the importation of low-grade Apples from U.S.A. between July 7 and November 15, because of the danger of introducing the destructive Apple fruit fly (or railroad borer, as it is called in America).

The Ronaldson-Tippett spray pump has proved very successful in Australian orchards, citrus groves and vineyards. Leading growers co-operated with engineers in perfecting the design and construction. The pump is made in eight different sizes and types by Ronaldson & Tippett Pty. Ltd., at their works in Ballarat. Further details and addresses of interstate agents are given in the advertisement in this issue.

Organising the Fruit Industry.

Improving the Export Trade.

To the Editor, "Fruit World."

Sir,—Each season's exports furnish lessons, which, if carefully considered, would provide food for reflection on the part of all interested. Such lessons show that, unless immediate steps are taken to readjust the business, Victoria will receive a setback, which will deprive it of its former position in the trade.

The main questions requiring consideration are:—

1. Local organisation.
2. Interstate co-operation.
3. The cost of labor.
4. The unqualified acceptance of liability for freight.
5. The question of standardised packing and the case.
6. Reduction of freight charges on steamers.
7. Concentration versus distribution.
8. An information bureau.
9. Co-operation of shippers and orchardists.

Local Organisation.

1. The question of local organisation is one which calls for immediate attention. The adoption of a Victorian Fruit Marketing Association has, in a measure, provided much useful information and assistance, but a correct system of co-operation would be a further advantage. What is required is the formation of local associations with a chairman, secretary and at least four local fruitgrowers, whose duty it will be to enlist every fruitgrower in his district under a co-operative scheme. The chairman and secretary should then represent that district in all round-table conferences. By this means, a correct estimate of exportable fruit should be obtained, with nothing left to chance.

These delegates will also be able to voice the wishes of their local associations, and bring forward recommendations for discussion. The present system of limited representation over a wide area requires adjustment.

Interstate Co-operation.

2. It cannot be denied that interestate co-operation is necessary, if we are to prevent the clashing of heavy shipments upon the British and Continental markets. We are interdependent one upon the other; therefore, to continue to act independently, as we do, and ship our fruit abroad without having come to proportionate interstate agreements, we must, inevitably face disastrous consequences. It would therefore be in the interest of all concerned to arrive at a complete understanding, when a season's crop has been estimated, and that the shipping space be applied for only when such understanding has been reached. Such an agreement can only be entered into by the States as a whole, hence the need for complete co-operation in the manner already suggested.

The Cost of Labor.

3. Owing to the general depression which is affecting Australia generally, the question of the cost of labor is one which should stand adjustment. Orchardists require assistance, but cannot afford to give employment at the price demanded by trade unions. It might therefore be worth a consideration to ask for a conference with the Trades Hall Committee; they surely would prefer to see their non-skilled laborer at work than to let him remain idle, and a charge to the State. Such a conference may cause those in authority to reconsider the question of a basic wage in regard to orchard employment, and even should it prove resultless, it must at least improve the

Trades Hall people's knowledge in respect of the cost per case of fruit in its production, and its sale value.

The Unqualified Acceptance of Liability in Respect of Freight.

4. Last season, for the first time in many years, shippers had to give a guarantee to the steamship companies that they would fill such space as they applied for, or pay the full amount of freight, viz., 3/6 per case on all shortages. Shippers accept in good faith the promises of supply by the orchardist, and arranges for shipping space accordingly. The orchardist, on his part, is prepared to supply according to promise, but in the event of an unforeseen visitation, such as the uncertain elements are liable to make, what then will be the position, seeing that an unqualified undertaking has been given to fill the allotted space?

A properly constructed organisation will do much to lessen the prospect of trouble, but the steamship companies should on their part be prepared to make certain allowances for that over which neither shipper or producer has control.

The Question of Standardised Packing Case.

5. It should be borne in mind that the heavy expense attached to oversea shipping precludes of any but standard quality fruit being shipped. Shipments of less value will not alone discredit Victoria in the eyes of buyers and financiers, but will leave a debit instead of a credit on the accounts of sale.

The established credits from oversea buyers or commission agents make clear that their credit is opened only for a standard pack. Care should therefore be taken in the selection of the fruit intended for shipment.

As buyers favor the bushel Canadian case for Apples, it is entirely to the advantage of consignors to use them, but a cheapening of their cost would be appreciated by all.

Reduction of Oversea Freight.

6. Some combined effort on the part of all the States should be made in respect of securing a reduction of oversea freights. At a moderate estimate, the freight paid by cash in advance on all fruit shipped if we include all the States should be about £200,000, as this sum has to be prepaid, a discount of ½ per cent. for cash would amount to £1,000, which sum could be allocated to the payments for unavoidable shortages, in respect of the unqualified acceptance of freight guarantee.

Concentration Versus Distribution.

7. There is considerable diversity of opinion in respect of this question, personal interest, being undoubtedly swayed when giving judgment, but there can be no two arguments in respect of the fact that the greater collection of buyers means greater competition, as an illustration. If Geelong, Bendigo, and Ballarat had to compete on the Melbourne market against local buyers for supply, the competition created from those towns must influence the selling price, but by supplying them direct, their competition is obliterated This argument must apply to Great Britain, where, hitherto, buyers from the provincial cities competed one against the other for supply in London.

An Information Bureau.

8. Australia House would undoubtedly be rendering good service were they to furnish more information concerning the carrying capacities of British and Continental markets. Such information could be used in connection with shipping, and would prevent strangulation from over supply. At present, its activities are directed to "armchair criticisms," but had they been able to inform us that Russian Apples would seriously compete with our Continental shipments, and that American Apples were likely to continue for a period at Hamburg, that information would have been of greater value than the aftermath criticism. Something in this direction is badly needed.

Co-operation of Shippers and Orchardists.

9. This movement, inaugurated by the V.F.M.A., is undoubtedly a very useful and dependable institution. Its knowledge of the intricacies attached to the export trade is a warranty for its employment on behalf of growers and shippers alike, but it needs more power, which can only be accorded by greater support. There cannot be any conflicting interests in this co-operation, as its work is for the general benefit of all concerned. I might suggest for its further advancement that an election of officers take place at an annual meeting, as there may be found a need for the displacement of those in office in favor of other selections, as well as an increase in its personnel.

Yours truly,
John M. Jacobs (Geo. Lister Pty. Ltd.)
Western Market, Melbourne.

BERRY FRUIT DISTRIBUTION.

Crop Expected to be Lighter Than Last Season.

Mr. H. Henderson, Secretary of the Silvan Fruitgrowers' Association, recently called at the "Fruit World" office. He is emphatically of the opinion that a "fruit bureau" should be established—a central place where orders can be left for delivery to householders. The experience of last year with berry fruits, states Mr. Henderson, amply bears out the necessity for a bureau or clearing house of this character.

The Silvan Fruitgrowers' Association is handling considerable quantities of Strawberries, Loganberries, Gooseberries, etc. Last year the crop was abnormally heavy. In the coming year the crops are expected to be much lighter.

Apart from factory supplies, a surprising quantity of berry fruit is now sold direct to private consumers in the suburbs and country districts. It is a matter of great interest to note the distance which Strawberries and other berry fruit will travel by rail—some fruit in 12 lb. buckets going as far as Mildura and arriving in perfect condition.

Victoria.

Hurstbridge.

Orchard work is well in hand at the orchard of Messrs. Smith and Rogers, Hurstbridge. Pruning and ploughing are finished, also the first spraying with lime sulphur.

There are 15 acres under Apples—principally Jonathans—also ten acres of Pears, Plums and Peaches. The trees have an excellent showing of fruit spurs.

Messrs. Smith and Rogers also have two acres devoted to Strawberries of the "Ever Bearing" variety. These are coming along nicely.

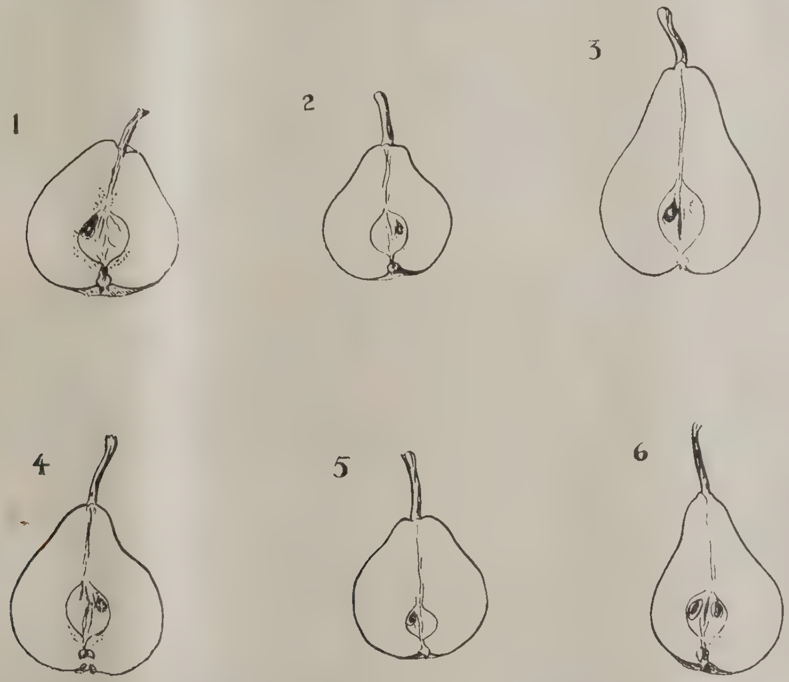
We are informed by Messrs. H. C. Pannifex & Co., of 26a Market--street, Melbourne, C.1, that they will supply free to any fruitgrower a reprint from the "Journal of Agriculture" showing official tests on codlin moth control; the report being by Mr. A. A. Hammond, Senior Supervisor, Horticultural Division.

The Keeping Qualities of Williams' Bon Chretien (Bartlett) Pears

Interesting Experiences from South Africa.

Of the thirty-three varieties of Pears exported from South Africa, only about twelve may be ranked as being of commercial importance at present. These are:—

Variety.	1927-28. Per-cent.	1928-29. Per cent.
Williams	21.3	36.0
Winter Nelis	14.0	6.1
Beurre Bosc	13.0	11.6
Glou Morceau	10.0	2.9
Louise Bonne	9.8	3.8
Beurre Hardy	8.0	3.4
Doyenne du Comice	5.9	2.0
Keiffer	5.4	20.6
Beurre Diel	3.6	4.3
Josephine	3.3	4.2
Forelle	1.7	0.6
Clapp's Favorite	1.7	2.0
Total in cubic tons (40 cubic feet)	13240	4843



Types of Pears. (For description see next page.)

The W.B.C. Pear heads this list in importance. During the last few seasons this variety has shown itself to be one of the Pears least affected by seasonal conditions, the crop fluctuations being relatively less with it than almost any other variety. It is the most important canning and drying Pear. Unfortunately, its general value and its high eating quality are offset to some degree by its uncertain keeping qualities; in fact of all the chief export varieties, the Williams causes growers most concern on this score.

Much of the dissatisfaction which has developed around this variety as an export Pear, has indubitably come into being owing to the marked relationship in its storage behaviour to the conditions under which it is produced. Considerable work has been done in America on this question, and a short account of the South African work will be given here. This work was carried out in 1924 to 1926; its main object was to determine whether the keeping qualities of the South African grown Williams Pear vary with locality of origin, and if so, the degree of variability and the conditions primarily responsible for it. While this work has brought to light certain facts, it can be taken only as a preliminary study.

During the first season's work, Bon Chretien Pears from the Hex River Valley (Cape) were compared with Pears of this variety from Constantia, near Cape Town. The next season Pears were obtained from the following localities:—

Locality.	Annual Rainfall.
Johannesburg, Tvl.	S/31 in.
Magaliesburg, Tvl.	S/27 in.
Pretoria, Tvl.	S/29 in.
Clocolan, O.F.S.	S/26 in.
Ceres, Cape	W/42 in.
Hex River Valley, Cape	W/11 in.
Constantia, Cape (3 orchards)	W/45 in.
Somerset West, Cape	W/25 in.
Mulders Vlei, Cape	W/28 in.
Stellenbosch, Cape	W/27 in.
Groot Drakenstein, Cape	W/36 in.
Elgin, Cape	W/42 in.

S: Summer. W: Winter.

The first season the fruit was stored at 45 deg. F. (7 deg. C.) in a chamber with cork slab insulation and overhead ice tank, specially constructed for the purpose. The second season, the bulk of each consignment was placed in cold storage at the Harbor Cool Chambers at Cape Town. The mean storage temperature was 34 deg. F. Only slight fluctuations about this temperature occurred. Samples were retained at the Low Temperature Research Laboratory, Cape Town, for chemical analysis, and for ripening at room temperature and samples were removed from cold storage at intervals and allowed to ripen at ordinary air temperature. At first the fruit was ripened in a cork-insulated chamber, in which the temperature was practically constant at 73 deg. F. (23 deg. C.). Comparison between fruit ripened in this chamber, and fruit ripened in the laboratory showed no significant differences. Accordingly, later lots were ripened in the laboratory in the open. The daily mean temperature throughout the experiments may be taken as being about 72 deg. F.

Each grower was asked to set aside for experimental purposes one or more trees growing in what he considered was representative Pear orchard soil on his farm. The fruit was to be picked from these trees each week, and the picking was to be done so that the sample (about 100 Pears) would be representative of the fruit on the tree at the time. The pickings were to commence about two weeks before and to continue for two weeks after the commercial pickings. As well as the weekly lots, it was arranged to get 50 trays of Pears from each grower at the height of his Williams season. These Pears would be considered a typical product of his orchards, in respect of quality and maturity and would indicate what the grower himself considered the most satisfactory time to pick this variety. Half the consignment of each of the 50 tray lots was wrapped in ordinary tissue fruit wrappers and the other half in commercial paraffined tissue of the best quality.

Certain differences in shape such as neck development and general appearance such as skin texture and color, were noticeable in Pears from the various localities. These differences were such that it was a relatively simple matter to be able to say where any particular Pear came from. The various types are outlined in longitudinal section in Figure 1; here type 1 represents the fruits obtained from Johannesburg and Magaliesburg; 2, Clocolan; 3, Elgin, Pretoria, Stellenbosch, Groot Drakenstein, Muldersvlei, Somerset West, Wynberg; 4, Ceres; 5, Constantia; 6, Hex River Valley.

The shape of a Williams Pear depends to a large extent both on whether the fruit is seedless or not, and on the amount of moisture available during growth. The absence of a well defined neck (No. 1), indicates seedlessness due to lack of cross pollination, and a narrow neck (No. 6) to the effects of a want of moisture during growth; No. 3 is the normal shape of a Williams Pear.

General Effects of Cold Storage.

THE RIPENING OF A FRUIT is due to complex and interrelated chemical changes within its tissues. There is a certain temperature at which normal ripening takes place most rapidly. At temperatures above or below this optimum, ripening takes place more slowly and the greater the divergence from the optimum, the greater the slowing down. Storage at high temperatures does not concern us here. In storage at low temperatures, owing to the fact that the individual chemical reactions which together constitute the ripening process, are not all altered to the same extent by this lowering of the temperature below the optimum, one finds that not only is the ripening slowed down but that certain abnormal effects in this ripening make their appearance.

Flavor.

An unpleasant musky flavor developed in Williams Pears stored at 34 deg. F. This muskiness was not a storage taint. The Williams Pear normally has a musky flavor. The "storage" muskiness could not be described by any other term than "musky" nor, except for its unpleasant taste, could it be distinguished from the normal muskiness. Either the unpleasantness was due to the quantity present or else to a change as a result of the low temperature of storage, in the relative proportions of the esters which in the normal blend produce the normal musky flavor of this variety. In some instances the "storage" muskiness, though marked, could not be termed unpalatable. Generally the fruit ripened at ordinary room temperature was of better eating quality than fruit ripened after a period in cold storage.

Internal Breakdown.

Usually the first indication of breakdown was a line of slight discoloration, frequently pinkish, between the core and the flesh at the calyx end of the fruit. This stage was followed by mushiness about the core, discoloration of the core and of the vascular bundles in the flesh. It was found that in Pears which had been in storage for a comparatively long period, one could easily remove the cores simply by gentle thumb pressure, and also that there was a tendency in such Pears to show a "vacuolated" condition, due to the collapse of a number of cells of the flesh and to air bubbles both in the intercellular spaces and within the cells themselves. In one or two instances ordinary temperatures seemed to recondition fruits which on removal from cold store were markedly mealy in texture.

Scald.

Scald is a physiological disease which frequently occurs in Pears in storage. It is not due to the upset of the chemical processes of ripening resulting from the low temperatures, but to the injurious effects on the skin of the vapors (esters) produced by the fruit itself; these volatile chemical substances, which give to a fruit its characteristic aroma, have a harmful effect on the fruit itself, if allowed to accumulate in the surrounding atmosphere. It is closely allied to Apple scald, a trouble on which a great amount of work has been done in various parts of the world. It is described as a browning of the superficial cells of the epidermis unaccompanied by softening or browning of the flesh. Frequently the skin around the lenticels is the first to turn brown; so that affected fruits may be normal except for small brown spots: (Fig. 2) or there may be (Fig. 3) a slight browning of the skin between the lenticels, the latter being darker brown. Not infrequently the visible symptoms of scald only make their appearance when the fruit has warmed up after removal from cold store, but complete browning of the fruit will occur in cold store after a certain time. In the case of Apples, wrapping in papers heavily impregnated with fats or oils has been found to check scald very effectively, as the esters are absorbed by the oil. Adequate ventilation, too, is very important as a preventive measure.

Apples picked green are considered to be more susceptible to scald than more mature fruit and it has been found that liability to scald varies from season to season; also that Apples from trees heavily irrigated scald more readily than others.

Temperature of storage affects the amount of scald; less scald is produced at low storage temperatures than at higher. Apples which are immature when picked, improve in so far as their resistance to scald is concerned, if allowed to ripen for a few days at ordinary temperatures before being placed in cold store. Otherwise the sooner the temperature of the fruit is reduced to 0 to 1 dg. C. (33 to 34 deg. F.) the better.

There are certain differences between Apples and Pears, at all events Williams Pears, in their relation to scald. Pear scald was found to develop in about 4 weeks at 45 deg. F. as compared to about 9½ weeks at 34 deg. F. Wrapping the fruit in waxed tissues did not appear to have any marked beneficial effects. It was found that Pears picked at weekly intervals showed with each successive weekly lot a shortening of the scald-free life of about one week. Pears from certain localities were much more susceptible to scald than from others.

Injection Breakdown.

THE WILLIAMS PEAR particularly from some areas, and in some seasons more than others, has a marked tendency to become mushy before becoming soft ripe. This mushiness is noticeable externally as a water-soaked patch, due to the space between the cells of the flesh being filled with water which ordinarily is retained within the cells. Cold storage helped to check this. In fact, in particularly susceptible samples, the fruit would not ripen under ordinary conditions because of this injection breakdown, but did so with greater success after cold storage. Generally the more mature the fruit at picking and the higher the storage temperature the greater the tendency to this type of breakdown. Humidity appears to have a big influence here, however; for example, of a sample of Pears at 86 deg. F., and in a humid atmosphere, 80 per cent. showed this injection after 11 days, whereas at a relative humidity of 50 per cent. all were still sound after 25 days.

Ripening.

In the ripening of a Williams Pear certain chemical changes take place, the most important of which are the conversion of starch into sugar, and the dissolution, resulting in a softening of the flesh, of the thin membrane (middle lamella) which cements the individual cells together. The ripening which takes place at an increased rate on first removal from cold store is definitely retarded to the extent one would expect, on returning the fruit to cold store.

Maturity.

Various points such as the size of the fruit, the color, the ease with which the fruit comes away from the tree, the color and development of the seeds, are taken by growers as indications of the stage at which to pick Williams Pears for export.

The color of a Williams Pear is not a safe index of its maturity. Pears from one area in particular, were soft ripe while still vivid green in color. Incidentally these Pears after cold storage became golden yellow. Similarly Williams Pears may become yellow on the tree, but still be firm and hard and possess excellent keeping qualities.

The most reliable index of the degree of maturity of a Williams Pear is the hardness of the flesh. This can be readily determined by means of an instrument which measures the pressure required to force a 5-16th in. cylindrical steel rod a certain distance into the flesh of the fruit. This pressure tester is an American invention and is being used on fruits of many kinds there.

Some pressure test figures for Williams Pears taken at Cape Town Docks during the 1927-28 season are given below.

Fig. 3.

Localities.	Average Pressure in lb. for half-monthly period ending				
	31/12	15/1	31/1	14/2	29/2
Constantia	—	24	23	19	—
Somerset West	—	28	25	23	—
Stellenbosch	29	28	25	20	—
Groot Drakenstein	28	27	23	19	—
Ceres	29	26	22	19	—
Hex River Valley	—	24	20	18	16

Note.—In Bulletin No. 70, the pressure test values as determined by the Oregon tester are given. This tester has a larger plunger than the tester now in general use. The figures given here all refer to the new type of instrument.

Keeping Qualities of the Fruit.

Big differences were found to exist in the keeping qualities of Williams Pears from various localities. As an example I shall give the results obtained from two localities, one (A) from which the Pears were good and the other (B) poor keepers.

Locality A.

Pears Allowed to Ripen Without Being Cold-stored.

Weekly lot No.	Pressure test (lb.)	Days to ripen.	Remarks.
1	29	16	These Pears wilted badly, but were of good flavor; they were breaking down on the 23rd day, i.e., on the 7th day after ripening.
2	30	13	As above; held up until the 5th day after ripening.
3	27	11	These did not wilt so badly, but their flesh was coarse; they were breaking down on the 6th day after ripening.
4	26	10	These ripened well and held up 5 days after ripening.
5	24	9	Excellent flavor and texture; held up about 10 days after ripening.
6	24	9	Excellent flavor and texture; they held up for 6 days.
7	21	8	Excellent flavor and texture; they held up for 8 days.
8	21	7	Excellent flavor and texture; they held up for 7 days.

Results of Cold-Storing Pears From This Locality.

Lot.	Remarks.
1, 2, & 3	Unsatisfactory; tough, wilted and insipid.
4	Fairly satisfactory; these Pears after 6 weeks storage, ripened in 5 days at room temperature and held up for another 4 days; their flavor was fairly good.
5	These Pears were very similar to lot 4, but were of better flavor.
6, 7, & 8	These Pears all stored well and ripened to good flavor; after 6 to 7 weeks' storage, they ripened at room temperature in 3 days, and held up from 7 to 4 days thereafter. In point of general quality, lot 6 was the best.

The height of the export season for this variety from this grower coincided with lot No. 4, whereas this variety was at its best for storage and so far as eating quality is concerned, from a week to a fortnight later; the pressure test of the fruit at this time was 24 lbs.

Locality B.

Pears Allowed to Ripen Without Being Cold-Stored.

Weekly Lot No.	Pressure test (lb.)	Days to ripen.	Remarks.
1	28	13	Flavor insipid; breaking down inside 2 days later.
2	26	11	Flavor fairly good; breaking down on 4th day after ripening.
3	27	10	Good flavor; breaking down on 4th day.
4	23	11	Fairly good flavor; breaking down on 2nd day.
5	21	9	Good flavor; breaking down after 4 days.
6	20	—	—
7	17	5	Good, mellow flavor, but 30 per cent. of the fruits showing injection type of breakdown; three days later all broken down.

Result of Cold-Storing Pears From this Locality.

Lot.	Remarks.
1 & 2	Unsatisfactory; wilted, insipid.
3	Stored fairly well and flavor fairly good except for marked muskiness; after 7 weeks' storage, these Pears ripened in 4 days and held up for a further 4 to 5 days.
4	Very similar to lot 3; muskiness not so marked.
5	Very similar to lot 3; after 6 weeks' storage these Pears ripened in 5 days and remained sound for about 4 days, when internal breakdown was noticed; they were of good external appearance for several days after this.
6 & 7	After 5 weeks' storage, these Pears ripened to good flavor in 5 days. On the 4th day thereafter, although slight pink discoloration around the core indicated the beginnings of internal breakdown, the flesh was firm, but of a melting texture and the flavor good. The Pears retained a good external appearance for several days longer.

With the exception of the first two lots, there were not very marked differences in the storage behavior of these Pears, although the last two lots were the best from the point of view of flavor and texture. Cold storage in several of these lots obviously had a beneficial effect on the keeping qualities of the fruit, as for example in the 7th lot, where for one thing, the injection type of breakdown to which these Pears were subject when ripened directly at ordinary room temperature, did not occur in the cold stored fruit.

The relation between the maturity as determined by the pressure test, and satisfactory storage qualities was found to vary to some extent according to the locality from which the fruit was obtained. The pressure tests of the first weekly lots to give satisfactory results when cold stored, varied from 24 lb. to 19 lb., with the average between 20 and 21 lb. The storage tests indicated that a South African grown Williams Pear of average keeping qualities, and giving an initial pressure test of about 20 lb., would ripen at room temperature (about 72 deg. F.) in 7 days and hold up for a further 5 days. After storage at 34 deg. F. for five weeks this Pear would ripen at room temperature in 4 days and hold up for a further 5 days. Scald could be expected to develop after a continuous storage period of 9½ weeks.

Conclusions.

OF THE 80 WEEKLY LOTS which were studied and of which a considerable number were in the opinion of the growers concerned too immature for export, no less than about 40 per cent. were found to give not altogether satisfactory results when cold-stored. Of the 12 lots which coincided with growers' most busy time with this variety, only half this number gave as satisfactory results as the better weekly lots from the same localities. This points to a general tendency to export the Williams Pear in a stage of ripeness which does not permit of the consumer getting this Pear at its best and there are few Pears which surpass the Williams Pear in eating qualities when it is at its best.

The fact must be borne in mind, however, that buyers overseas, realising the perishable nature of this variety, do not look with favor on shipments which are not green in color. Consequently fruit showing yellow on arrival oversea may not receive the prices which its keeping and other qualities merit.

The keeping qualities of the Williams Pear are dependent upon a number of factors, but a relatively low moisture content in the fruit, a high total nitrogen content and a high percentage of total soluble solids other than sugar and acid in the juice, seem to be associated in Pears of the best keeping qualities. While in general, high temperature during the growing period has an important influence on the subsequent quality of the fruit, it was concluded from this investigation that within the limits of temperature which obtain in the various localities where the experimental Pears were grown, the storage qualities of this variety appear to be more dependent upon cultural conditions generally than upon temperature. Pears were obtained from two adjoining orchards, the trees in which were practically unpruned. Soil conditions were apparently very different, as in one orchard the water table was very high while the other orchard was situated on a hillside and was well-drained. Physiologically the difference in soil conditions may have been more apparent than real, as in the former the abundance of moisture may have been offset by a poorer root development. These trees crop heavily and there was little difference in their keeping qualities, while the keeping qualities of Pears from heavily pruned trees in an orchard in the same locality were not as good.

The relation between the various factors which may be grouped under the term, "cultural conditions," and the keeping quality of the fruit, require full investigation. As this work points to the possibility of improving the keeping qualities of this variety of Pear where these have been shown to be poor, by altering the methods of cultivation to meet the requirements of the particular locality. —V. A. Putterill, in "S. African Fruitgrower and Small Holder."

Harvey Orchard Implements are on view at the Royal Agricultural Show, Melbourne, September 18 to 27. These implements have won the favor of fruit producers throughout Australia, New Zealand, and other parts of the world. Some of the well-known implements include double-furrow vineyard and orchard plough, spring-tooth riding cultivator, one-way orchard disc cultivator, power lift tractor, farm and orchard implements, fruit graders and dehydrators. Catalogue and price lists obtainable from D. Harvey, orchard and vineyard implement specialist, Box Hill, near Melbourne, Vic.

Fruitgrowers' Cool Stores Association.

Successful Annual Conference.

State-wide Growers' Organisation Desired.

THE 12th Annual Conference of the Fruitgrowers' Cool Stores Association of Victoria was held at the Burnley Gardens, near Melbourne, on August 19. Mr. W. Mock presided over a representative attendance. The Chairman's desk was pleasantly ornamented with choice blooms of flowering prunus.

Mr. Pollard (Assistant Minister for Agriculture), in opening the Conference, urged that still further improvement be made in the preparation and packing of fruit for export. The question of maturity was vital. The Marketing Bill provided an opportunity for fruitgrowers and all sections of primary producers to organise should they desire to do so.

Hon. A. E. Chandler, M.L.C., urged the sending of only the best fruit to export markets. Improvements in grading and packing were being made, but it was possible to do better. It was imperative for costs of production to come down to make fruitgrowing profitable.

Annual Report.

In presenting the 12th annual report, the President stated that 20,000 Apple recipe booklets were distributed at a cost of £163, of which the railways contributed £100. In addition, the Railway Department provided a handsome poster at their own expense. The Fruit Section at the two days' Fruit and Flower Show conducted in conjunction with the Royal Horticultural Society was not adequate, and the guarantee of £50 from the Apple Advertising Fund had to be met.

Railway Concessions.—The N.S.W. Railways would not grant concessions on interstate fruit rates. The Victorian Railways granted a concession to stations within 20 miles of Melbourne by extending the special inter-system fresh fruit rates between Melbourne and Sydney to stations within 20 miles of Melbourne. A reduction of 1/2 per ton was also made in the border charges on fruit from all stations, making reductions from all stations varying from 1/2 to 5/3 per ton.

The Sugar Burden.

The Secretary read correspondence from the Victorian Fruit Marketing Association, enclosing a letter from the Prime Minister, stating a Committee of Enquiry would be appointed to review the sugar industry, requesting a nomination from fruitgrowers. It was decided, on the motion of Messrs. A. E. Hocking and J. H. Lang: "That in view of the very severe handicap under which the fruit growing industry labors through the unduly high and artificially fixed price of sugar, which makes processing of fruit uneconomic, that this Association supports the nomination of Mr. R. E. Boardman to represent fruitgrowers on the proposed Board of Inquiry into the sugar industry to be appointed by the Federal Government, and urges that all evidence be taken on oath.

Railway Concession.

In addition to the concession mentioned in the annual report the Railway Department wrote in response to the Association's letter, stating that with regard to stations distant more than 20 miles from Melbourne, provision had been made whereby fresh fruit consigned from such stations would be charged at the inter-system rates to or from Melbourne, plus the ordinary mileage rate for the distances in excess of 20 miles from Melbourne, when cheaper than the sum of the local rates applicable to each station concerned.

Affiliation Fees.

The necessity for having sufficient funds to carry on the work of the Association was stressed by several speakers: the question of raising the affiliation fee was fully debated. It was finally decided that affiliation fees be at the rate of 5/- per 1,000 case capacity, with a maximum of £15.

State-wide Organisation.

On the motion of Mr. J. H. Lang, Harcourt, the Conference agreed to the proposal that two representatives be appointed from each section of the fruit-growing industry of the State, to meet quarterly for the purpose of conferring on matters of general policy.

The Secretary presented an interesting report showing comparative costs in the use of electric power.

Proposed Government Guarantee.

Mr. E. H. Hatfield (Tynong), proposed that the Federal Government be approached for a bounty on Apples and Pears exported. The growers had to pay heavy costs for spray material, implements, because of Government action, also indirect taxation through the sugar agreement, Paterson butter scheme, and petrol tax.

Mr. W. A. Thiele said the time had come for the various bounties to be done away with—not to ask for more.

Mr. G. Fankhauser stated that land had artificially doubled in price. Action had to be taken now to benefit the next generation.

The motion was lost.

There were interesting discussions on the subject of white oil, the consensus of opinion being that much experimental work was still necessary.

In reply to Mr. Williamson, the Granny Smith Apple was recommended by many growers for grafting. The Granny Smith was stated to be one of the best export Apples and suited for local markets. Mr. Hatfield recommended for local market Stewart's Seedling and Lord Wolseley.

It was decided to request the N.S.W. Department of Agriculture to make available the services of Mr. H. Broadfoot to lecture on his tour abroad in Victorian districts on his return.

Addresses were given before the Conference as follows:—"The Value of Cold Storage" (Mr. J. H. Lang), "Cold Air and Direct Refrigerated Systems" (Mr. J. Hepburn), "Effective Temperature on the Storage of Peaches, Plums and Pears" (Mr. G. B. Tindale, B.Ag.Sc.), "Soil Analysis and Manure" (Mr. F. M. Read, M.Ag.Sc.), "Ammonia Losses in Cold Stores" (Mr. R. Werner).

The following officers were elected:—President, Mr. A. E. Hocking, Healesville; Vice-President, Mr. F. Moore, Blackburn; Secretary, Mr. J. G. Aird, Ringwood; Delegate to Chamber of Agriculture, Mr. J. H. Lang; Delegate to Southern Fruitgrowers' Association, Mr. J. G. Aird; Auditor, Mr. J. W. Barrett.

The Relative Values of the Cool Air and Direct Expansion Systems of Refrigeration for Apples and Pears.

A Paper by Mr. J. Hepburn, Manager Government Cool Stores, Victoria Dock, Melbourne, before the Fruitgrowers' Cool Stores Association Conference.

THIS is a subject which presents many debatable features, and in regard to which no very convincing evidence has yet been produced one way or the other.

With the co-called

direct-expansion method,

the evaporating coils are placed in the chamber and the refrigerant evaporating within those coils produces the refrigeration. The coils are generally placed along the walls, and, in some cases, the ceilings are coiled also. In most cases, the refrigerant is introduced at the bottom of the coils and evaporates towards the top. The only disturbance or change to the air in the chamber is when the door is opened.

In operation, the coils become coated with a film of frost or snow, depending in thickness on the work being done, and length of time in operation. The desired temperature is maintained by regulating the amount of refrigerant admitted to the coils.

In regard to

coils placed on the ceiling

of a chamber, whilst this is very satisfactory viewed from one angle, they are not so desirable when viewed from another. From the point of view of the distribution of the cooled air, coils hung to the ceiling give the best results. This can best be understood when it is remembered that cooled air, being of a greater density than air of a higher temperature, will tend to descend and displace the warmer air.

With the stacking of such an order that this cooled air is freely permitted to descend amongst the cases, a very desirable cooling effect is obtained. It can also be realised that where the coils are placed on the ceiling to the best advantage, or, in other words, if the ammonia is introduced at both ends of the chamber, a very even temperature should be obtained amongst the cases of fruit.

The objection to the ceiling coils in regard to fruit is, of course, the danger from drip and the consequent wetting of the cases. Attempts to eliminate this as a rule somewhat detract from the efficient operation of the coils. However, this danger in regard to ceiling coils is probably somewhat overstated.

Effect of Wall Coils.

Touching now on the wall coils, the difficulty is the even spread of temperature through the chamber. Tests have shown that the air has a tendency to eddy from coil to coil, and various methods have from time to time been tried to help the circulation.

The rate of cooling in regard to those coils is fixed in as far that any attempt to exceed a certain rate would result in the freezing of the fruit nearest the coils.

I may here state that the coils generally in use at the present time, namely, the continuous coil, is not now regarded as the best apparatus to evaporate the ammonia, and is giving way to what is called the flooded type, which, although more or less in the experimental stages, is regarded as a more satisfactory coil.

Another feature of the wall coils is that as the ammonia is introduced at the bottom of the coil, the most active work is being done near the floor, and the coldest air may have a tendency to remain unduly long in that position.

The Air-cooled System.

COMING now to the air-cooled system, as we all know, the air is cooled through being passed between sets of coils within which the ammonia is evaporating, and over which a brine spray is continually flowing. The apparatus is commonly termed a battery.

The brine serves several purposes. It provides an intimate conductor between the air and the coils, prevents the formation of frost or snow on the coils, and is regarded as a purifier and cleaner of the air. To some extent, the humidity of the chamber can be controlled by means of the brine. The air, in travelling through the battery, attains a speed of from 300 to 500 feet per minute.

In most fruit cool stores, the air is introduced into the chamber through spaces left between the ceiling boards, and is supposed to be evenly distributed throughout the chamber. Air, as the agent for the exchange of heat between one body and another, is probably one of the least efficient, but is the only one so far made applicable to this system of refrigeration.

The Two Systems Compared.

WE come now to the relative merits of the two systems.

For the purposes of this paper, we will ignore any differences that exist from the engineering, installation, and operating cost viewpoint, and confine ourselves to a consideration of the possible effects of both systems on Apples and Pears.

Various theories have been advanced from time to time with respect to the two systems. To take one:—It is claimed for the air system that a reserve of refrigeration is contained in the brine, and that this can be called upon without operating the compressor. Theoretically, this sounds quite good, but in practice there is not much in it. The loss of refrigeration at the battery room, and in the air trunks is sufficient to offset any advantage here, and it is just possible that the snow on the coils of a coiled chamber give as much service in this direction.

With chambers coiled on the walls, circulation of the air, or, more correctly, the flattening out of the temperature all over the chamber is the greatest concern. Rough tests have shown that the air in such chambers has a tendency to eddy from coil to coil. Parts of the chamber are sometimes unduly long in being reduced in temperature. Attempts to alter this condition, and speed up the process, is often the cause of the excessive cooling of the fruit nearest the coils.

Close stacking undoubtedly aggravates the condition of uneven temperature in a chamber.

In a chamber such as we are dealing with, it might be possible to have fruit in three conditions—that which is excessively cooled, that which is cooled to an ideal temperature, and that which is not sufficiently reduced in temperature. It will be appreciated that to form an opinion on any particular parcel of fruit in a chamber might be very misleading. For the changing and purification of the air in a coiled chamber the door has to be depended on.

With the air-cooled chamber,

while it has many advantages, it is just possible it may have disadvantages we are not aware of. It is generally understood that in passing the air through the brine spray a cleansing and purifying effect is obtained. What is not so clear, however, is the composition of this air after leaving the battery, and this is a subject which might stand investigation.

The introduction of the air into most fruit chambers is through spaces left between the ceiling boards, known as the Madison Cooper ceiling. In common with the coiled chamber, the stacking is most important, and should be of an order to permit the air to descend amongst the cases.

The foregoing are the conditions which obtain with the two systems, and it is just possible that neither obtain the best possible results. It must be remembered, however, a remarkable degree of success has resulted from present methods of refrigerating fruit. This should not deter us, however, from looking further afield to achieve greater success.

There are two distinct sensations of coldness. One is what might be termed a still cold, and the other where the air is violently agitated. It will be generally agreed that of the two, the still cold is the least objectionable. It is well known that men will work in low temperatures where the air has practically no movement, without any great discomfort.

Pears and Apples may be similarly sensitive.

As previously pointed out, air is a poor agent for the exchange of heat, and a more direct method may give better results. More direct methods of treating fish and meats have resulted in greatly improved products, and while those products require comparatively low temperatures, still it is possible more direct methods in regard to chilling temperatures such as those required for Apples and Pears may be an advantage.

Keeping this in mind, and as Mr. Tindale seems to be somewhat permanently in the saddle at the cool stores, it is my intention to have some experiments carried out by passing Apples and Pears through brine, cooled to the desired temperature.

It is just possible that with the equipment as used at present, the maximum results possible have been obtained, and it is only by continued effort and experiment that we can hope to achieve further success.

Ammonia Losses in Cool Stores.

Prevention Methods.

An Address by Mr. R. Werner Before the Fruitgrowers' Cool Store Conference.

THE mere fact of this matter being brought forward shows that the loss of ammonia in a refrigerating plant may be a serious item in the maintenance cost, and therefore should be constantly guarded against. Sometimes I have heard the theory advanced that the ammonia has just vanished in the system. This, of course, cannot be, as it is a physical impossibility to turn a substance in confinement into nothingness in the same confinement.

Working temperatures in a refrigerating or icemaking system are never so high that pure ammonia can be disintegrated, but it is an incontrovertible fact that ammonia once introduced into a system remains there excepting what is lost by leakage and purging.

There are several possible sources of leakage in an ammonia system, and one of the principal is leakage past the piston rod of the compressor, readily noticeable by the smell of ammonia in the engine-room. This leakage is caused by wear on rod, which may either be scored or through ordinary wear be reduced in diameter to such an extent that only frequent renewal with soft packing will effectively stop leakage past the rod.

On no account should packing be allowed to become hard by usage and an attempt be made to screw up the gland too tight on a worn rod. The effect will be that the packing will give just a bit more when the worn part of rod passes through the packing, and if it is exceptionally hard and fairly solid the slightly tapered ends of the worn part of the rod are putting an extra strain on the side, tending to burst the stuffing box. This has happened in several cases in my experience, and has always been caused by a badly worn rod, hard packing and too tightly screwing up of rod.

Another not so easily noticeable leakage is from condenser coils, especially when the plant is run continuously, as any ammonia escaping is readily absorbed by the condenser water, and if the leakage is not serious, may not be noticed for some considerable time. A careful test with sulphur fumes or litmus paper when the condensers are dry will soon show the slightest leak. It is similarly difficult to detect small leaks in submerged coils, as in ice tanks, or partially submerged coils, as in brine batteries. In the latter case it could be readily discovered before any great loss could occur, on account of the confined space in which the battery is housed, whereas the whole charge may be lost in condenser leaks before they are discovered, especially if these are placed in an elevated and exposed position.

Besides

leaky stuffing boxes and pipes,

is the possibility of leaks from flanged and screwed joints. In a properly installed plant with pipe connections made by experienced fitters the possibility of leakages in joints is very remote, and if it should occur, is easily remedied. A leak in a screwed joint can be readily caulked and a leak in a flanged joint is mostly stopped by tightening up of bolts. I may mention here that it is advisable to go over all joints in the whole system occasionally and tighten up all flanged joints. There is a possibility of the packing in joints softening in the course of time, and a following up with a spanner at times may prevent a serious blow-out.

The extent of ammonia leakage is largely a personal matter. It is watchfulness which determines between a wasteful and an economical plant, and the man who allows the slightest smell of ammonia to exist about the plant is certain to be confronted with excessive ammonia bills, while he who is constantly on the alert and never rests until his plant is as free from the smell of ammonia as an ordinary engine-room will be referred to as the one who ran such and such a plant without addition of more ammonia for so many years.

It may sound fantastic, as it is a practical impossibility for any plant to be run indefinitely without any loss of ammonia, but I know of instances in my own experience of small plants having run without additional ammonia for anything from 3 to 5 years.

No hard and fast rule of how much ammonia per year should be added to a plant kept in fair condition, but from experience and inquiries I have made regarding consumption of ammonia, I have arrived at a pretty fair estimate, and this is about one cwt. cylinder per ten tons of refrigeration per year. That means that for any store having a 20-ton plant, two one cwt. cylinders of ammonia per year would be a fair allowance. In very few cases less is used, but if any more is required it would certainly be advisable to look into the matter of where it is going to.

Loss of ammonia is considered to be followed by a consequent loss of efficiency. While this is undoubtedly the case if the loss is serious, a slight temporary leak would not affect the efficiency of a plant to any extent, especially if a plant is kept well charged as a rule. A more serious

cause of reduced efficiency

is the presence of water and oil in the system, a contamination which is more or less pronounced in plants having been in use for a number of years, and is not so easily detected as a leak of ammonia.

I have often heard it expressed that after a certain quantity of ammonia has been put into the system, sufficient to justify expecting better result in efficiency that it practically made no difference to the machine and that more had to be put in to show a decided improvement in working of the plant. In a case like this it is advisable to test the ammonia for its water contents by drawing off some at the bottom of expansion coils or at the oil trap into a test tube. After all the gas is evaporated note the residue left in the glass. If water is present to any extent—and I have seen it up to about 20 per cent.—something ought to be done to get it out of the system.

There are three ways of doing this effectively, and one way to do it thoroughly.

First.—Purge the system at the lowest part of the expansion coils, pumping most of the pressure out before purging.

Second.—Pump all the ammonia into cylinders and have it purified at the ammonia works.

Third.—Blow out old charge and put in a fresh charge of pure ammonia.

Fourth.—Connect a purifier into the system and purify your ammonia as required. This is the most effective and economical way of keeping the ammonia in as pure a condition as possible at any time without undue loss and without inconvenience in the running of plant. It will not be necessary that the purifier should be kept in constant use, but it should be in place and connected up ready for use when the occasion for its use arises, as arise it does sooner or later on every plant in possession of the man who is ambitious enough to get 100 per cent. efficiency out of it. There is no doubt that everybody who owns and runs a plant would like to get this 100 per cent. efficiency, but you must bear in mind that it cannot be obtained by waiting for it to turn up, but that it has to be looked for with intelligence and determination by the man who takes a pride in his work and his plant.

SHOWS TO COME.

South Australia.

Adelaide Royal—September 13-20.

Victoria.

Melbourne Royal—September 18-27.

Queensland.

Gympie—September 10-11.

New South Wales.

Leeton—October 1.
Griffith—October 14-15.
Castle Hill—February 13-14, 1931.
Goulburn—March 19-21, 1931.

Cool Stores a benefit to the Fruitgrowers and to the Community.

A paper by Jas. H. Lang (Harcourt), before the Annual Conference of the Fruitgrowers' Cool Stores Association.

DURING RECENT YEARS a change has gradually taken place in the ethics of business, and more and more the public are judging the success or otherwise of an organisation not so much by the profits it makes or the dividends it pays to its shareholders, but by the service it renders to the community.

Judged by this standard, the fruit cool stores amply justify their existence.

When one looks back at the conditions that prevailed with regard to the storage of Apples fifteen or twenty years ago and compares them with the conditions prevailing to-day, the benefits to both grower and consumer are at once apparent. Practically all the Apples then intended for the winter markets were shed stored.

In some districts it was possible to keep the fruit to marketable condition until September, and even October, but the wastage from shrinkage and decay very often amounted to fifty per cent. Consequently the supply on the market was comparatively small, the grower being compelled to market the bulk of his fruit within three months of picking. This caused the market to be glutted during that period with a shortage of supplies until the next season's crop was ready.

Cool storage has permitted the grower to spread his supplies over the whole period of the year, fresh Apples being available every month, and with ordinary care in handling and cool storage little or no waste incurred. The price throughout the year is thus more or less stabilised and the consumer is enabled to obtain supplies at a reasonable price at all times.

3,000,000 Bushels of Apples.

With a normal production of Apples in Victoria of three million cases, one million are shipped to overseas markets, the cool stores have a capacity of one million, leaving an equal number to be marketed during the earlier months of the year within a short time of picking. When the cool storage accommodation was limited high prices were usually obtained for cool-stored fruit late in the season, but to-day the grower looks more

for stabilised prices

throughout the year than for exceptionally high prices at the end of the season, though fruit marketed at this period must necessarily bear the costs of cool storage. As the cool stores at present in operation are capable of containing one-third of a normal crop, the commercial limit for cool storage has been about reached, and any increase in districts where the production of Apples is increasing will probably be offset by decreased accommodation being available where fruitgrowing is declining.

Peaches for Interstate Trade.

An extension of cool store activity to the benefit of all concerned has taken place during the last year or so on the Northern fruitgrowing districts of the State. Peaches and Pears are being pre-cooled prior to dispatch to the interstate markets, and the condition of the fruit on arrival, which ensures a higher price, amply justifies the extra work and expense. I have been informed by fruitgrowers from New South Wales that Peaches and Pears from the Goulburn Valley arrived on the Sydney market this year in perfect condition. An extension of this practice may lead to a wider and more profitable distribution of our

On the tables of Ordinary People
- - Your Fruit is Judged

THEY do "eat more . . ." when the quality is there. Take the Smiths, or the Browns, or the Robinsons—they all love fruit! But notice housewife Smith—how she picks and chooses when she buys.

It's—"Oh, not that **spotty** one, **please**!"

And Mrs. Brown, buying oranges, insists, on "those nice **clean** ones—five a shilling!"

* * * * *

GROWERS,—They do buy, and eat, more fruit when it is clean—and good. Don't let Scale, Aphis & Sons rob you of your hard-won margin of profit—keep your trees clean, healthy, and vigorous with this famous Australian spraying oil.

4-Gallon and 1-Gallon tins obtainable through your storekeeper or Fruit Growers' Association. Buy a tin to-day—NOW!

GARGOYLE

Spraying Oil

"The dormant stage spray"

VACUUM OIL COMPANY PTY. LTD.

The Oldest and Largest Oil Manufacturers in Australia and New Zealand.

Testimony to . . .

SULPHATE OF AMMONIA

comes from a variety of sources, but the progressive fruitgrower shows his appreciation in the most practical manner possible—continued and increased orders.

And no wonder, for Sulphate of Ammonia has been identified definitely with increased yields of better quality fruit. **Better Trees and More Profitable** returns from them.

Sulphate of Ammonia is not used by any one particular section of the fruitgrowers, but has a wide range of usage, from the producer of high-quality citrus, to the grower of the choicest berry fruits.

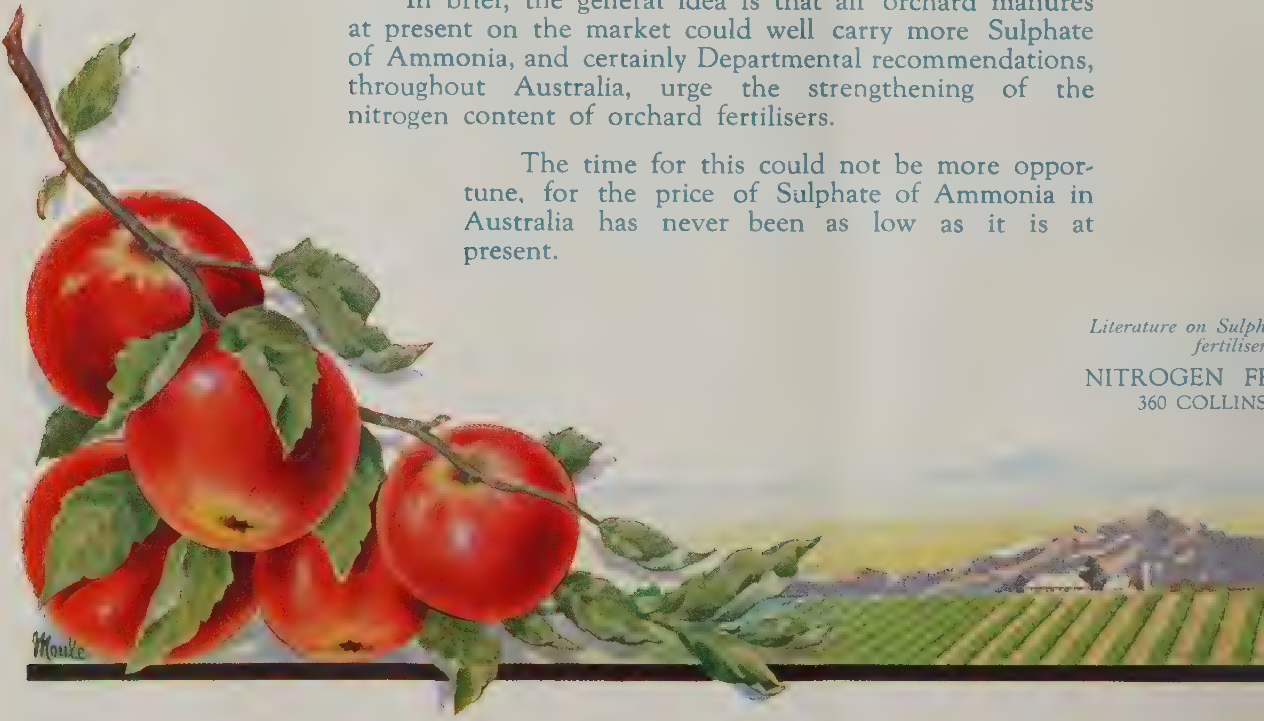
Citrus growers find that applications of from 5 cwts. to 8 cwts. per acre pay handsomely. Growers of canning fruits use it because they found, even before the recent drastic cuts in price, that it was the cheapest source of nitrogen supply. Export apple growers, while differing in their ideas of what is a suitable rate of application, speak highly of Sulphate of Ammonia as an influence towards bigger profits in the orchard.

In brief, the general idea is that all orchard manures at present on the market could well carry more Sulphate of Ammonia, and certainly Departmental recommendations, throughout Australia, urge the strengthening of the nitrogen content of orchard fertilisers.

The time for this could not be more opportune, for the price of Sulphate of Ammonia in Australia has never been as low as it is at present.

Literature on Sulph
fertiliser

NITROGEN FE
360 COLLINS



Read what some users say about Sulphate of Ammonia

APPLES
GENERAL INTENSE CULTURE

Bacchus Marsh, 1/8/30

I have been using Sulphate of Ammonia for the past 15 years, and I am still of the same opinion of it as a wonderful fertiliser, especially to anyone engaged in intense culture, where one has to get the very best returns from a small area. Sulphate of Ammonia will improve all vegetable crops 100 per cent. It has a wonderful effect on a crop that has had a set-back from pea mites &c., if worked in between the rows and watered. It will also improve apple trees if applied just as the buds are bursting giving the leaves a nice healthy appearance, and improve the yield. I have no hesitation in recommending Sulphate of Ammonia to all gardeners. I use it at the rate of 1 cwt. to the acre with bone and super at sowing time, and a top-dressing when vegetables are half grown . . . with wonderful results.

A. PEELMAN

BERRY FRUITS.
POTATOES.

Kinglake, 30/7/30

We still retain the good opinion of Sulphate of Ammonia. We use on Berry Fruits to advantage, also potatoes and other crops, with first-rate results, and we would not feel O.K. without it.

CHARLES EXTON & SONS

CITRUS

Curlwaa, N.S.W.
18/8/30

I have been using Sulphate of Ammonia on my Citrus Orchard for some years and I feel convinced that it is the best of manures I have ever used. Visitors to my orchard remark how healthy my citrus trees look and my crops are most satisfactory.

This year I have increased my order from two tons to three tons of Sulphate of Ammonia.

E. L. WATMUFF.

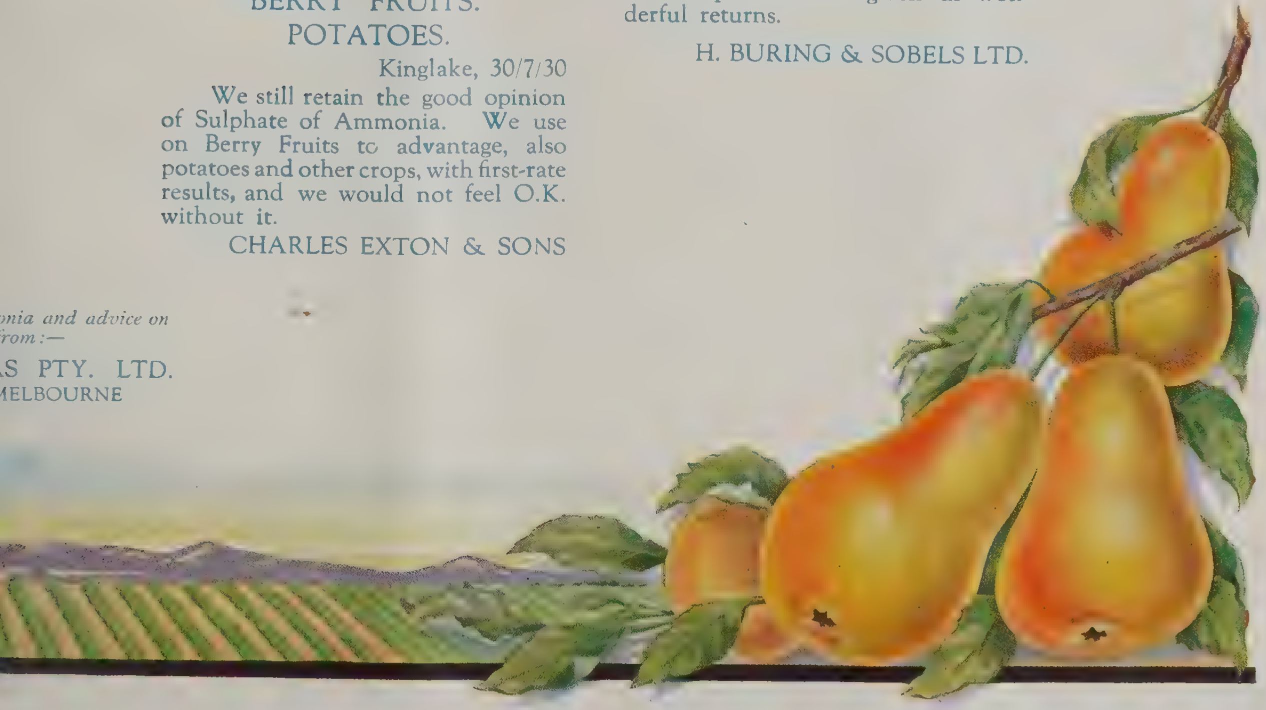
VINES.

Adelaide, 5/8/30

The following mixture we have always used and still maintain as being the most economical and profitable fertiliser for vines. — one - third Sulphate of Ammonia and two-thirds Superphosphate. 4 cwts. per acre has given us wonderful returns.

H. BURING & SOBELS LTD.

nia and advice on
rom:—
S PTY. LTD.
ELBOURNE



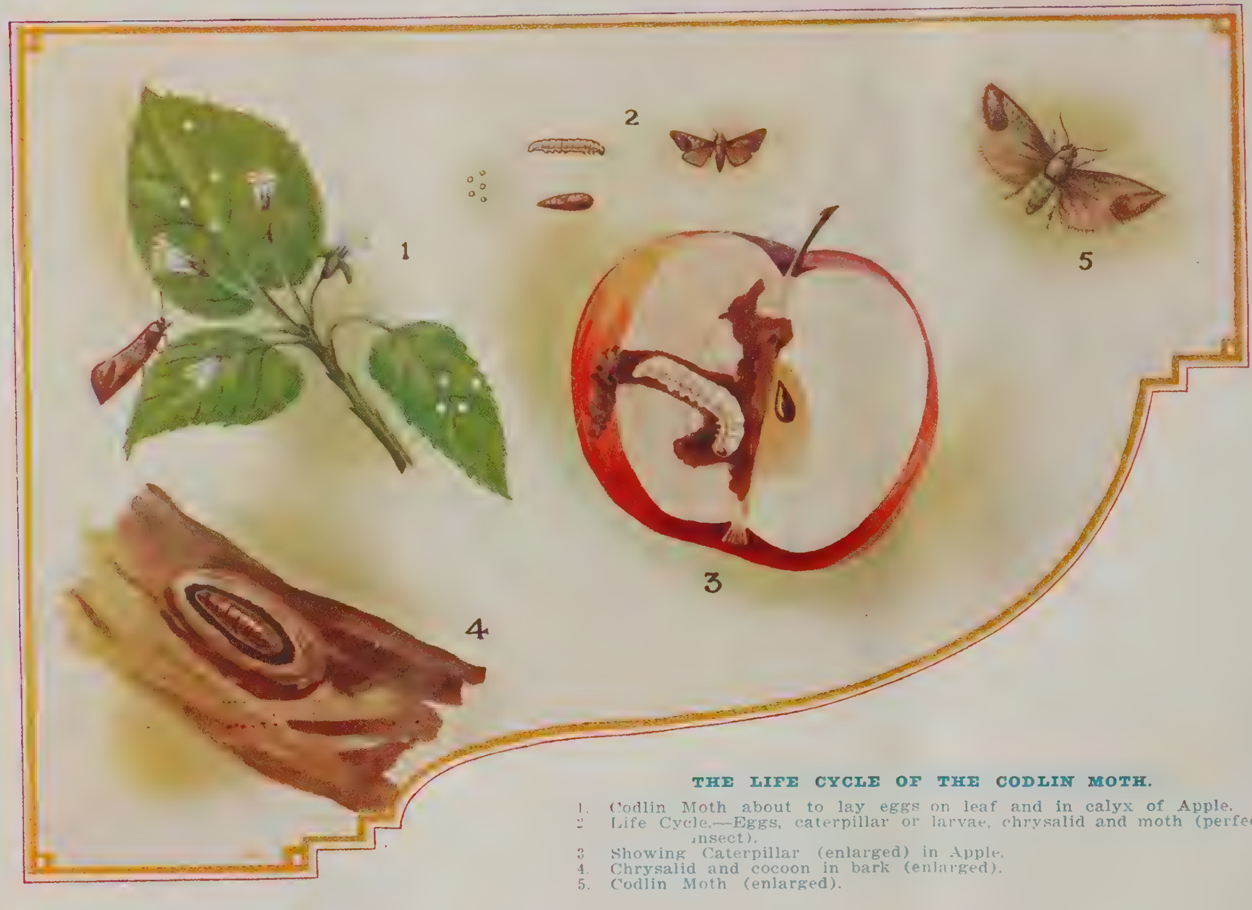
THE CODLIN MOTH

Ensure Your Fruit Crop by Spraying Thoroughly with

CLENSEL A BRITISH PRODUCT **CLENSEL**

A Wonderful Insecticide and Fungicide

Non-Poisonous - Non-Inflammable - Destroys Insect and Fungus Pests - Also a Tonic for all trees and plants



THE LIFE CYCLE OF THE CODLIN MOTH.

1. Codlin Moth about to lay eggs on leaf and in calyx of Apple.
2. Life Cycle.—Eggs, caterpillar or larvae, chrysalid and moth (perfect insect).
3. Showing Caterpillar (enlarged) in Apple.
4. Chrysalid and cocoon in bark (enlarged).
5. Codlin Moth (enlarged).

Every moth destroyed in the Spring is worth a hundred later in the season

CLENSEL is most effective on all soft-bodied insects

Can be mixed with Arsenate of Lead as a Spreader

Messrs. Sheehan Bros., Red Hill, Vic., write about Clensel as follows:—

"Now that we have completed harvesting this season's Apple crop, we are pleased to report the excellent results obtainable after using "Clensel" for the control of codlin moth. On the block tested our percentage of codlin last year was 50 per cent.; this year it has worked out at less than 1 per cent. Our formula was: First spray, 4 lbs. arsenate of lead powder, 1 gal. of Clensel in 80 gals. water. Second spray, January, 2 lbs. lead, 1 gal. Clensel in 80 gals. water. Third spray, February, 1 gal. Clensel to 100 gals. water."

J. H. Lang, Esq., Harcourt, and others write of Clensel's effectiveness. Clensel not only destroys the pests, but the eggs, caterpillar, or larvae.

FULL DETAILS FROM :—

BRUCE ANDERSON, 54a Hoddle Street
Abbotsford, N.9., Victoria
Phone: J 4272

MESSRS. BERNARD SHAW & CO.,
Perth, W.A.

MESSRS. F. W. DEBNAM PTY. LTD.,
Hobart, Tas.

fruit, particularly Pears through the northern portions of the Commonwealth.

The fruit after pre-cooling is loaded solidly in the trucks, and a temperature lower than normal is thus maintained throughout the journey.

Continuous Research Needed.

One subject on which investigation could with advantage be made by the grower is the optimum life of the various varities of Apples and Pears in cool storage, having regard not only to their keeping qualities, but to their condition and flavor when they reach the consumer.

Apples, particularly, deteriorate more or less in flavor when in cool storage, and it should be the aim of the grower to place the fruit in the hands of the consumer before any decrease has developed to a marked degree.

There are sufficient varieties grown in commercial quantities to ensure a supply to the consumer each month of the year in the best possible condition and flavor, thus giving satisfaction to the buyer, that he will continue to purchase and not be deterred by having Apples of poorer quality placed before him. It should be possible after investigation to draw up a schedule showing the varieties of Apples and the months when they are at their best. This again would benefit both the grower and consumer.

VICTORIA-N.S.W. FRUIT CONSIGNMENTS.

Reduction of Freights.

APPRECIATION was expressed at the recent annual conference of the Fruitgrowers' Cool Stores' Association of Victoria, because of the action of the Victorian Railway Commissioners in providing a lower rate of freight for organised consignments.

A summary of the position is set out by Mr. J. G. Aird, Secretary of the Fruitgrowers' Cool Stores Association —thus:—

I enclose copy of letter received from the General Passenger and Freight Agent, Victorian Railways, as requested. My Association approached the Railways at the latter part of last season asking for a reduction in the rates charged for interstate fruit, with the result that in January last the railways granted a concession to stations within the twenty-mile radius, charging same at the same rate as if the starting station were Melbourne. In other words it means that the interstate fruit was carried free to Melbourne from stations situated within twenty miles of Melbourne. This present letter is a reply to my Association's request that this concession be granted to stations outside the twenty mile radius. You will note that this request has been granted.

The effect of this concession is that stations, say 40 miles from Melbourne, will pay:—

1. Local rates for twenty miles.
2. Free transit for twenty miles.
3. Special intersystem rates from Melbourne to interstate destinations.

A border charge of 1/2 per ton was also withdrawn, thus saving the grower freight on his interstate fruit of from 4/9 to 5/3 per ton.

The New South Wales Railway Department was also requested to make the 21 ton rate applicable to a six-ton minimum, making a further reduction of 8/3 per ton, provided that at least 21 tons were carried on the train. This request was refused by the New South Wales Railways.

Canadian Crop Prospects.

Conditions prevailing throughout the Dominion of Canada at the end of June indicate a good average crop of most fruits.

The commercial Apple crop, as compared with the 1929 season, indicates reductions of 40 per cent. in Nova Scotia, 23 per cent. in Quebec, 33 per cent. in Ontario, less than the five-year average in New Brunswick, while in British Columbia the crop is expected to yield an increase of 22 per cent. The total crop is estimated at 3,113,380 barrels, as compared with 3,939,915 barrels in 1929, or a reduction of approximately 22 per cent., and slightly less than 3 per cent. under the average commercial production for the five-year period, 1925-29.

THE U.S.A. APPLE CROP.

A report from Washington State, U.S.A. Pacific Coast, published in June, stated that prospects were for a good Apple crop, probably equal to the 1928 crop. In Oregon conditions were also shaping well.

Eat More Fruit.

Man Aged 63 Runs 23 Miles.

Lives on Fruit, Nuts, and Vegetables.

A VISITOR strolled into the "Fruit World" office, active, virile, face tanned, aglow with health. We greeted him cordially.

"I would like to tell you," said our friend, "what fruit eating has done for me. I am 63 years of age; last week I competed in a race and ran 23 miles without stopping. Each day I run six to eight miles before breakfast. I enjoy wonderful health. Ten years ago I was a broken man, given up by doctors. Up to the age of 52 years I was a regular meat eater, and had a "spot" when I felt inclined."

"And what brought about the change?" we asked.

"I decided I would live more naturally," was the reply. "I cut out meat and now live on fruit, vegetables and nuts. These are so healthful and delicious that I wonder more people do not go in for similar diet. I can't be bothered with having a "spot" either. I believe most people eat too much meat and too little fruit. Some eat fruit to end off a meal. Why not follow Nature's way and make complete meals of fruit, nuts and vegetables? Anyhow," he continued with a smile, "this simple diet suits me."

EMBARGO ON LEMONS.

STRONG OPPOSITION is expressed in N.S.W. against any attempt to lift the embargo on the importation of foreign Lemons.

By a warm air treatment, Lemons have been successfully "cured" in the Gosford district and other centres in N.S.W. These Lemons have carried well to distant markets, and it is contended that growers can fully supply the Australian demand for Lemons,—and export to New Zealand as well.

Fruitgrowing at Doncaster.

A Review of the Orchard of Messrs. Lawford & Zerbe, Doncaster, Vic.

THE DISTRICT OF DONCASTER, Victoria, with its thriving orchards and cool stores, is well known. One of the largest and best known in the district is that at present carried on by Messrs. Lawford & Zerbe, the partners being Mr. E. I. Lawford, the son of Mr. Edwin Lawford, who originally established much of the orchard now carried on by the partners mentioned. Mr. Edwin Lawford, whose life's work was reviewed in the "Fruit World" some years ago, is now living in retirement on the property. The other partner is Mr. E. H. Zerbe, a son of Mr. August Zerbe, of Doncaster East, also a prominent grower living in retirement.

At Doncaster the orchard property of Messrs. Lawford & Zerbe consists of about 50 acres of Pears and 10 acres of Apples. The main varieties of Pears grown are: Josephines, Packhams, Winter Nelis, Beurre Bosc; Apples: Yates and Rome Beauty.

In a walk through this property some fine old trees were noted. Some of them being 50 years—still giving good crops annually. The first point of interest was a patch of Winter Nelis Pears on to which Packham's Triumph had been grafted. The Winter Nelis is a shy bearer, but when interpollinated with Packham's Triumph, it proves very successful. In addition, Packhams being an early Pear it can be picked early, thus enabling the Winter Nelis to develop after the picking of the Packham. The grafting thus has the dual effect of producing an early and a late Pear on the same tree, and one variety interpollinating the other.

The next trees noted were a block of Josephines, which at the time, during July, had Dun peas growing between the rows for ploughing in in the spring. We also noted some 40-year-old trees of the Black Achan Pear, which had been top worked to Beurre Bosc. These trees are still giving good crops. Other Pears noted were Josephines and Broom Park.

The next block contained 18-year-old Apple trees, the varieties being Rome Beauty, three acres, and Yates, six acres. The Yates were very fine trees, which are giving good crops, but unfortunately the cost of producing good commercial size fruit of this variety is unduly high in proportion to the return, even at what seems high prices. It is now proposed to graft on to them Granny Smiths and Democrats. Furthermore, this variety only sells at a limited period of the year, after prolonged cool storage, and sales are practically restricted to within Australia.

System of Irrigation.

The orchards in Doncaster suffered for many years from shortage of water. For years the growers had to rely on erratic rainfall. This has now been overcome, however, by water supplied from the Board of Works. Practically all the orchards in the district now have pipes connected with the Board of Works' main.

The water for the orchard under review is obtained at three points from the Board's mains, and delivered to three reservoirs on the highest points of the orchard. Water is also pumped a height of over 100 ft. into these reservoirs, from three large gully dams, through 3 in. pipes, and the three reservoirs are also all connected by 3 in. pipes, of which there are in all about one mile. Off this main 3 in. system, about two miles of 2 in. branch pipes are laid across the slopes of the rather steep slopes, dividing the whole orchard into sections, having from 12 to 20 trees to the row. These rows are then watered from downpiping, of which there is one line or more to each section, in every third length of which a slit is cut, by means of which the whole row of trees is watered simultaneously, and the supply of water to each tree may be regulated exactly. As many as 25 may be watered at one time, each in a different section.

The installation of this irrigation system was a costly one, but the lack of rain over a period of years made it absolutely imperative in order to save the trees.

In another part of the property we noted some fine three-year-old Lisbon Lemon trees, which were making excellent growth. In addition there is an area of approximately 1½ acres of eight-year-old Lisbon Lemon trees which are growing in an ideal sheltered position. The production from these trees, which are not even yet in full bearing has been 500 cases annually.

Spraying is carried out most thoroughly on the orchard, and last year arsenate of lead was used in conjunction with the addition of ½ lb. of Fluxit spreader to 100 gallons of spray. We are informed by Mr. Zerbe, who manages the orchard portion of the business, that the percentage of codlin moth was not 1 per cent.

Use of Lime.

The whole of the orchard was treated with lime last year, about one ton to the acre being applied. This was used as an addition to the usual stable and chemical manures. Mr. Lawford contends that lime has the effect of making food available in the soil which is otherwise not touched. It also sweetens the soil and generally assists the trees. The "Applim" brand of lime which was used, is almost as fine as flour, and dissolves very easily into the soil.

At the time of our visit to the orchard, pruning was in full swing.

In addition to the orchard property, which we have described herein, Messrs. Lawford and Zerbe have 40 acres of Apples at Croydon; varieties being, Jonathan, Five Crown, Rome Beauty, Stewarts, and Yates. At Box Hill they have 20 acres of Peaches, consisting of a succession of dessert varieties which ripen from December to March.

Both partners take a keen interest in all matters tending to the betterment of the fruit-growing industry, and are active members of the Doncaster Fruitgrowers' Association.

The packing and marketing of the produce is all carried out on the property, where there is an up-to-date packing shed and cool store under the control of the Lawford Fruit Exchange. A review of the activities of this company is published elsewhere.

U.S.A. Crops.

California estimates her Prune crop this year at 234,000 tons, as compared with 103,000 tons last year, and 220,000 tons in 1928. The bearing acreage of Prunes is increasing rapidly.

The Pear production of California is estimated at 218,000 tons.

Western Australia.

The Fertile South-Western Country.

Regular Rainfall: Good Soil.

Orchards and Sheep Runs.

Mr. Godfrey W. Hester, Hester's Hills, via Bridgetown, W.A., writes under date July 18, 1930:—These notes are from the Nelson district, south from Perth, about 165 miles by rail. There are some very fine rich parts on the rivers and brooks, but we have also some fairly poor gravelly country, but, having such a regular rainfall, the whole of the country with a little top-dressing with super can be turned to good account. It is a fact that we have no bad land in this district, the rainfall being the chief reason. The men on the land in the South-West of West Australia hardly realise the value of the land. We can grow anything and everything in this district.

In the orchard, Jonathans predominate. Cleos. come next, then Dunn's Seedling and Yates—these would be the kind mostly grown. The Granny Smith is one of the most sought after by the buyers, but although it is a good Apple, I feel sure that it will be over planted, as so far the price paid by the shipper has always been the top for Grannys. We have a great variety of Apples here, but many of them are out of date now, and are being gradually grafted over.

Last season we had a very light crop in our orchards—only about 12,000 cases. The year before we had 25,000 off the same land: this light crop ran right through the district, many of the trees not coming into blossom.

Good Prospects for 1931.

I am pleased to say the coming season's prospects are remarkably good; the fruit buds are swelling out on all the trees, and it looks to me as though we are in for a big crop, exceeding any previous big crop by 25 per cent.

The Westralian Farmers Ltd. are handling most of the fruit grown in West Australia, and have several good cool stores where they can take in several hundred thousand cases. Most of the growers have shares in the company, and are very satisfied with the treatment they get. They handle about half a million cases every year. It is a very great advantage to have a primary producers' company to see to all our produce and often do buying for the people as well. We also have a good Agricultural Society and Bridgetown Fruit Association.

Direct Fruit Sales.

The fruit from this district is generally sold before it leaves the orchard to the shippers to oversea buyers all over the world, and my experience teaches me that if the fruit is the best and well put up there are plenty of buyers waiting for it.

We have district inspectors who are very exacting in their requirements. They turned a few cases down for me this year, and after it had been sent to cool store for three months it was sold in the markets at 12/- per case, so it could not have been too bad.

My wife and I have 60 acres of orchard in bearing and 30 four-year-olds. We are very fond of the Cleo. and Granny Smith. We have grown up to 1,300 cases to the acre on the Cleos. This would not be an average on the lot, but on the best—a number of acres. Then we have a good number of Jonathans, Romes, Rokewood, and Statesman.

To improve the industry,

cut out the exporting of tens of thousands of cases of inferior fruit. A great deal too much fruit reaches the markets that should never be packed.

The next very important part is to see that the fruit is truly graded and packed by skilled hands and reliable people, whether men or women. To encourage good buyers we must do our part in giving them good fruit. I think it would be an advantage to have a lot of qualified inspectors appointed during the packing season so that they could just pop in without any notice and have a right to open and inspect a number of cases of fruit, and compel

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the owner to have any that were not up to the mark repacked.

My grandfather (Captain Hester) arrived in West Australia in October, 1829, with his family, my father—Edward Godfrey—being the second son—so we are real West Australians. My father took up land where we are now living, near Bridgetown, 80 years ago. I am now 73 years, and still find plenty of work to do, carrying on the land improvements. There are thousands of acres of sub. clover now in the district, and still thousands more to plant. My sons and I run sheep and cattle as well as the orchard. We have 3,000 acres, and can run from 5,000 to 6,000 sheep and 100 head of cattle. Our rainfall is 30 inches, and we have never had a drought of any kind—not in the past hundred years.

Cultural Notes.

MR. G. W. WICKENS, Superintendent of Horticulture Department of Agriculture, W.A., writing in the "Journal of Agriculture," states that Apple trees, particularly the old ones, will be assisted in setting fruit if a dressing of nitrogenous manure, sulphate of ammonia or nitrate of soda at the rate of 3 cwts. per acre is applied to the soil about two weeks before the trees blossom. Nitrophoska is also worth trying, as it contains 17.5 per cent. nitrogen, in addition to potash and phosphoric acid in water soluble form.

During the months of October, November and December, fruit-fly will become increasingly active as the weather becomes warmer, and the soft fruits ripen, and baiting, trapping, gathering fallen fruits, and destruction by boiling of all infected fruits is essential work that should not under any circumstances be neglected.

For Orange aphis, Black Leaf 40 and soap is a standard control spray, and can be safely used on the trees at blossoming time.

Spotted Wilt of Tomatoes.

THE Council for Scientific and Industrial Research has just published an interesting bulletin dealing with the spotted wilt of Tomatoes, the contributors being Geoffrey Samuel, M.Sc., J. G. Bald, B.Agr.Sc., and H. A. Pittman, B.Sc.Agr.

The bulletin is nicely illustrated. The distribution, severity and symptoms of the spotted wilt (virus) diseases of Tomatoes are described in detail.

No evidence was obtained that the disease was transmitted by seed or by soil. The disease is stated to be not easily transmitted by direct inoculation with the sap from crushed, diseased plants. Transmission, however, has been consistently obtained with a species of thrips—Frankliniella insularis (Black Carnation thrips).

None of 48 commercial varieties of Tomato tested is appreciably resistant to the disease; the small Red Currant Tomato is fairly resistant, and this is being crossed with standard varieties in an effort to combine resistance with commercial qualities.

Experiments on control of the disease by the use of insecticidal dusts and sprays, and by fumigation in Tomato glasshouses, have not given encouraging results, and serve to direct attention to the need for further knowledge of the biology of the vector insect, Frankliniella insularis.

New Zealand Notes.

Spraying Operations.

PIP-FRUITS.—It is usual to begin the season by applying an insecticide spray at the late dormant stage—usually the beginning of September—or at the very beginning of bud-movement. Red oil is the popular insecticide for this period, and used at a strength of 1-15, will clean up scale insects, etc., on Apples and Pears.

It may not be necessary to use this expensive spray every year on all varieties, especially on varieties of Apples, which receive strong applications of lime-sulphur for foundation sprays in the programme for the control of fungus diseases, as lime-sulphur in itself is a good insecticide. However, periodical applications of oil are advisable and necessary for the welfare of the tree. Lime-sulphur, 1-15, at green-tip, followed by a second spraying, 1-35 to 1-50, when the flower-buds are well expanded or showing some color, may be applied to varieties of Apples less liable to black-spot attack and probably more susceptible to powdery mildew.

Varieties such as Delicious and Dougherty usually receive a Bordeaux spray, strength 6-4-50, at the green-tip stage, followed by lime-sulphur, 1-35, at the open-cluster stage. Bordeaux used later than the green-tip may cause serious russetting. Varieties receiving this initial fungicidal spray of Bordeaux would require a late dormant oil spray.

For the control of black spot on Pears, Bordeaux is recommended, the first application being made at green-tip, strength 6-4-50, followed by a 3-4-50 mixture at the pink stage. Lime-sulphur may be used in place of the second Bordeaux on such varieties as P. Barry, Josephine, and Winter Cole, which are less liable to attacks of black-spot, and do better under lime sulphur treatment.

Stone Fruit.—For the control of leaf-curl, shot-hole, etc., on stone fruits, Bordeaux must be used, the first application at bud-movement, strength 8-6-40, probably having been already applied. On varieties particularly susceptible to leaf-curl, a second application should follow at the pink stage, at strength 3-4-40. Sometimes lime

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sulphur, 1-50, is used at the pink stage, and is probably an important application for brown rot control. The stone fruit grower, however, should be prepared to fight brown rot from the fruit-set period with sulphur in the precipitated form, 10 lb. to 100 gallons, or dry-mix sulphur (16 lb. sulphur, 5 lb. lime, 8 oz. casein, in 100 gallons). The times of application will depend on weather conditions. It may prove necessary at times to allow not more than a week between sprayings.

Cultivation.

THE value of good tilth in the orchard during the summer is fully realised. However, to be certain of securing that good tilth, early preparation is necessary. Cover-crops, if growing, should now be turned under and allowed to rot before dry weather sets in. If no autumn ploughing has been done, the land should be turned over as early as possible if conditions are suitable. Where the land has been autumn ploughed, further cultivation work may be deferred for a short time, but the land should be worked down before growth begins.

Manuring.

IT IS REASONABLE to assume that fruit trees, particularly heavy-bearing ones, remove each year large amounts of available plant food from the soil, and that unless a regular and adequate supply of such plant food is made available trees must decline in growth and productiveness. By cultivation we help the changes constantly going on in the soil, whereby plant-food becomes available. However, it is recognised nowadays that this supply of plant food must be supplemented by the use of fertilisers, otherwise production will go down. On the other hand, by a studied application of fertilisers production may be increased sufficiently to give a good margin of profit over the cost of manuring. If quick-acting chemical fertilisers are being used, applications should be made just before bud movement, giving a dressing of from 4 lb. to 8 lb. of a complete fertiliser per tree, in the proportion of 1 lb. sulphate of ammonia, 4 lb. superphosphate (44/46 per cent.), and 1 lb. sulphate of potash.

Grafting.

THE REWORKING OF TREES by the grafting method may be undertaken as soon as growth begins. From the middle of September, trees are usually in a fit condition, but the work should not be carried on after the middle of October. Scions must be in good condition—that is, quite sappy, but not too forward. Clean cutting, good binding, and exclusion of air about the union are three important points to effect if this operation is to be successful. Carelessness in these details, and a resultant poor "take" of grafts, means a year lost and probably some detriment to the stock. Binding may be done with raffia or with strips of waxed cloth. In the former case grafting wax is smeared round the union.

The popular method of reworking old stocks is by rind-grafting. The scion, consisting of a length of the preceding year's growth—preferably about the thickness of a lead-pencil and shortened to three buds—is cut to a wedge; a short cut is made vertically through the bark of the stock, and the bark on one side of the cut is lifted carefully to admit the scion; the wedge-shaped scion is pressed down beneath the bark of the stock; one edge of the wedge of the scion is pared off while being prepared, so that this edge will lie against the unlifted edge of bark on the stock when the scion is pushed home.—"N.Z. Journal of Agriculture."

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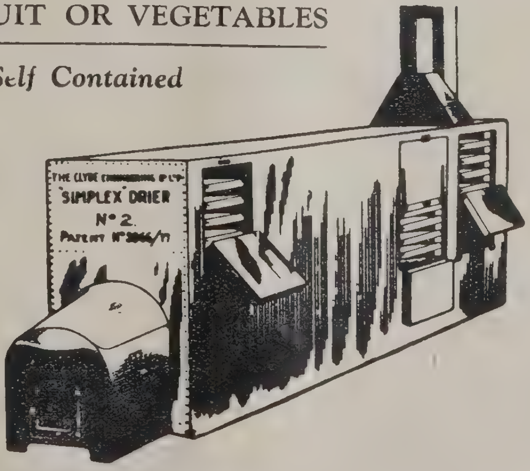

COLD STORAGE OF FRUIT

Individual Orchardists' Stores are Increasing in Favor

Review of the Operations of R. Werner & Co. Pty. Ltd.

COLD storage has come to be recognised as a necessary adjunct to the fruit industry. Many benefits have resulted from the erection of cool stores in progressive fruitgrowing districts.

Individual growers who have had the enterprise to erect cool stores on their own properties have also reaped considerable benefits. The development of the fruit industry is such that an increasing number of individual growers are giving very careful consideration to the advantage to be derived from a cool store on their orchard properties. Quite a number of small plants have been installed by individual growers. The following names (with capacities of their cool stores) come readily to the mind:—

Geo. Apted, Arthur's Creek, Vic., 11,000 cases; Dobson Bros., Ferntree Gully, 10,000; W. Lipscombe, Croydon, 10,000; D. Scott, Greensborough, 7,000; J. D. Carpenter, Hastings, 6,500; Burke Bros., Diamond Creek, 6,500; Bunyip, 6,118; Elinora Orchards, 6,000; W. C. Thomas & Co., Tynong, 6,000; Heinz Bros., Ballarat, 5,000; F. Finger, Balwyn, 5,000; D. J. Corbett, Doncaster, 5,000; O. Muller, Queenstown, 5,000; W. R. Jenkins, Doncaster, 5,000; J. W. Bailey, Narre Warren, 3,800; O. J. Shearer, Nutfield, 3,000; Mordialloc Ice Works, 3,000; J. E. Moore, Panton Hill, 2,500; T. J. Clark, Diamond Creek, 2,500; French, Deepdene, 2,500; Cobram (P. Rossiter, citrus fruit), 2,500; J. Hanley, 2,000; W. J. Smith, Panton Hill, 2,000; R. Johns, St. Andrews, 1,000.

Cool stores on orchard properties, can, according to their capacity, be divided into three or four chambers. The whole or portion of these chambers can be used as required. A study of the figures relative to running costs reveals that the average yearly running cost is about 1/6 per case, covering power, insurance, interest on investment, and depreciation. This sum could very easily be recovered by being able to hold the fruit over the glut periods and placing on the market when prices are more remunerative.

While originally cool storage was deemed to be of special value for holding Apples and Pears, it is now known that the value of cold storage covers a much wider scope. Peaches, Plums, Citrus, Grapes, are excellent subjects for cold storage. Recently the cold storage research officer of the Victorian Department of Agriculture (Mr. G. B. Tindale, B.Agr.Sc.), has conducted most valuable researches demonstrating that dessert Peaches can be successfully stored for six weeks. With citrus fruits the storage life extends over several months.

The actual running costs of a private 5,000 case store are limited to power, oil and general upkeep. The operation of the plant is usually left to the owner or one of his family, and is quite a simple matter, requiring practically no skill as far as an engine driver is concerned. It is unnecessary for even one man's entire time to be spent on a 5,000 case store.

The operation of the plant is simple, and can be carried out by the orchardist without the slightest need for a skilled engineer.

All plants installed by Messrs. R. Werner & Co. Pty. Ltd., carry a twelve months' guarantee. The advice of the company's experts is always available when required. No difficulty is experienced in maintaining correct temperatures. Generally speaking, a compressor of an average capacity of one ton will take care of 1,000 cases of fruit quite easily, leaving margin for extensions. A five-ton compressor will easily look after 5,000 cases of fruit. By running a corresponding increase of hours, an increased capacity can be obtained. The ownership of a cool store is very much like the ownership of a house. It is quite an easy matter for an orchardist to own his own cool store. The question for him to decide is whether it will pay him to do so.

Quite a number of growers who have built small cool stores on their own property have been able to cheapen the capital cost of the erection by purchasing their own timber and building the store in their slack time.

Messrs. Werners will gladly supply plans and layout for this purpose.

When building a store, provision should also be made for modern packing facilities to be under the same roof.

In considering the question of the erection of a cool store, the individual should take into account three matters:—(1) Running costs; (2) Interest; (3) Depreciation. A summary of figures obtained from a number of growers who are operating small cool stores indicate that the sum of 6d. per case should be allowed for each item. This would amply cover the cost of fuel for engine, lubricating oil, ammonia, recharging, etc. In some cases the cost would be slightly less, but speaking generally, it should not exceed the amount mentioned.

The price of 1/6 per case works out cheaper than the charges made in large cool stores where space is leased for a period by individual growers.

Where electric power is evailable, the man who wants to store a few thousand cases may have an automatically controlled plant if he so desires. A little instrument called the thermostat watches over the temperature, starting up the machinery when the high limit is reached and stopping it at the low limit. A variation of about three degrees is usual, and once set, the chamber will be held at the desired temperature operating no more and no less than is required, according to the weather.

Where electricity is not available, a modern crude oil engine can be installed, and this will work out considerably cheaper than the old method of a kerosene engine. Arrangements can be made with the oil companies to install sufficient supplies of crude oil to run a plant for the whole season.

Condensing water for refrigerating plants should not give any trouble, as ample supplies can be obtained where a dam is on the property.

Finance.

Where necessary, Messrs. R. Werner & Co. are always willing to arrange terms on the basis of one-third to one-half the cost as a deposit, the balance to be paid over a period of two or three years. The crux of the whole position is that an orchardist with a cool store on his property keeps his fruit under his own control, and also saves considerable time and expense in carting from orchard to central store, and then the further trouble of continually sorting and packing the fruit.

A display of Messrs. Werner's cold storage equipment is on view at the Royal Agricultural Show, Melbourne, September 18 to 27. Visitors are welcome to inspect and obtain information. The firm also invites growers to inspect their works and equipment at their premises, 54 to 86 Burnley-street, Richmond.

South Australia.

SOUTH AUSTRALIAN FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION.

THE monthly meeting of the South Australian Fruitgrowers' and Market Gardeners' Association was held on July 25, when the following members and delegates attended:—Messrs. W. H. Ind (President), G. Jennings (Vice-President), G. H. Parsons, G. W. Summers, H. Schultz, C. H. Ragless, C. W. Giles, H. L. Cooke, J. Donaldson, N. T. Hobbs, L. J. Wicks, W. P. Whittlesea, A. O. Peterson, W. H. Hicks, C. E. Hockney, R. E. Townsend, J. B. Randell, J. Mitchell, F. Stanford, G. Pitt, and W. McKerlie. Apologies were received from Messrs. R. Hunter and F. C. Staniford, Ms.P., and Mr. H. B. Robson.

Railway Freights.—Mr. Clapp, Chairman of Victorian Railways, in acknowledging our letter of thanks to him for consenting to a reduction in freight charges on celery, stated that he was always pleased to assist primary producers as far as he possibly could.

Sugar Embargo.—Secretary reported that Mr. C. W. McRostie had represented the Association at a conference of Fruit Canners and Jam Makers and Fruit Growers' Associations in Melbourne, at which it was decided to make a strenuous effort to get relief from the effects now pressing so heavily on fruit industry through the sugar embargo.

The Executive, realising the immense importance to fruitgrowers of the likelihood of the Federal Government deciding to continue the Sugar Embargo for another term of three years after August 31, 1930, decided that it would co-operate with kindred associations in other States, and others interested in making a strong protest against continuation.

Duty on Olives.—Acting Minister of Customs wrote stating that Federal Government could not at present agree to Olive growers' request that the duty on imported Olives be increased. Secretary was asked to notify manufacturers of this decision.

Celery Growers.—Mr. Jennings reported on the activities of the Celery growers' section. Mr. McRostie was doing excellent service in Melbourne market in the face of very depressing conditions, as all other vegetables were exceptionally cheap, and unemployment on the increase.

Tomato Growers.—The Secretary reported that the Tomato Growers' Committee was now preparing for the coming export season, which promised to be a very busy one. Many Melbourne agents were asking for appointment to act on behalf of Association.

SPECIAL EXECUTIVE MEETING.

The Sugar Enquiry.

A special meeting of the Executive was held on August 11 to nominate a delegate to act at the Sugar Enquiry on behalf of the Fruitgrowers of Australia, who are only entitled to have one delegate. It was unanimously decided to nominate Mr. R. E. Boardman, of Melbourne. It was decided to assist in payment of delegate's expenses, which will be considerable as the enquiry will last from September 1 to October 31. The Executive was pleased to hear that the S.A.F.M.A. was also nominating Mr. Boardman and helping financially. It is hoped that Mr. Boardman will be chosen to act as he is well acquainted with the fruitgrowers' problems, and is capable in every way to represent one of the principal primary industries in Australia—the hard working and inadequately paid fruitgrowers!—"The Garden and Field."

The annual meeting of the Campbelltown Branch of the South Australian Fruitgrowers' and Market Gardeners' Association will be held on September 8.

Verdun.

In the paragraph in our August issue on page 304, the name of Mr. H. A. Wicks was wrongly given. The information really had reference to Mr. A. W. Mack. In this S.A. orchard Apples are mainly grown—including Jonathan, Dunn's, Romes, Rokewood, etc. A specially designed "Lightning" grader has been installed.

Mr. Mack has on his orchard a private cold store with capacity for 8,000 cases of fruit. The crop this season was 24,000 cases of Apples, of which 12,000 were exported.

A tractor is used for pulling a four-furrow plough, etc.

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SOUTH AUSTRALIA.

Growers and Traders Confer.

A conference of growers and traders was held recently in Adelaide. Various difficulties confronting special sections of the trade—growers, wholesalers and retailers—were dealt with. Retailers stated that they were forming an Association to watch over their interests. Suggestions were made for improved grading and packing.

Marion.—At the recent annual meeting of the Marion branch of the S.A. Fruitgrowers' and Market Gardeners' Association the following office-bearers were elected:—President, Mr. Keith L. Rainsford; Vice-Presidents, Mr. I. R. Adams, Mr. C. E. Hawker; Hon. Secretary, Mr. J. R. Duncan; Auditor, Mr. C. E. Hawker; Delegates, Mr. W. A. Richardson, Mr. A. L. Tilley and Mr. J. C. Duncan.

Planting Citrus Trees.

THE BEST TIME for the planting of citrus trees is somewhat dependent upon the district and situation, but it may be done successfully at almost any season except the late autumn to midwinter. In districts where mild winter conditions are the rule, the autumn (about March) is satisfactory, but the main planting elsewhere is best carried out at the end of winter—about August. If planting is delayed until September or October there is a greater risk of loss as a result of wind and reduced soil moisture. It is desirable that the tree should have recovered from its transference from the nursery before adverse spring weather is experienced.

Great care should be taken that the roots of the young trees are not allowed to become dried out by exposure to the sun or air between the time they are lifted in the nursery and the time they are planted. It is a good plan to dip the roots in a puddle of clay before packing to reduce loss of moisture while in transit. Such puddled clay should be washed from the trees before planting in the orchard.

The ends of all damaged roots should be cut off smoothly, and the roots well spread in the hole and covered with loose moist soil, which should be pressed tightly around them. The trees should not be planted deeper than the depth at which they stood in the nursery, and in shallow soils where top-dressing is practised they should be planted rather shallower. When planting is completed, the ground should be ploughed up to each row of trees. If the weather turns dry after planting, the trees should be irrigated or (if irrigation be not possible) each tree should receive a couple of buckets of water. This should be applied by forming a basin round the tree, and after the water has soaked away, filling the basin in with dry soil. The tree should be cut back on planting. Removal of the leaves is also recommended to prevent too rapid transpiration before the tree becomes re-established.

If the leaves along the stem drop, as they often do, the bark should be protected from the hot sun with bagging or other covering.

In districts subject to frost, the trees should be sheltered by bushes, bags, or cornstalks for the first two or three winters after planting.

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Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

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Fruit Merchants
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A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
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Melbourne

STORAGE TEMPERATURES FOR EXPORT APPLES.

Investigation in New Zealand.

THE NEW ZEALAND Department of Scientific and Industrial Research has just published a bulletin dealing with the relation of storage temperature to the overseas carriage of some varieties of New Zealand export Apples by Mr. L. W. Tiller, Orchard Chemist, Cawthron Institute, Nelson, New Zealand. Six varieties of Apples are dealt with, namely—Sturmer, Jonathan, Delicious, Dunns, Cox's Orange and Statesman.

The detailed report is very interesting. Taking everything into consideration, it appears that there is only one widely exported variety, namely Cox's Orange, that is likely to give serious trouble, although there is room for improvement with Jonathans as well.

Harvey Implements.—At the Royal Agricultural Show, Melbourne, September 18 to 27, D. Harvey, Orchard and Vineyard Implement Specialist will be at 58 Plummer-avenue. Various ploughs, harrows, etc., are on view, also power lift tractor implements, fruit graders, etc.

TREE and STUMP PULLING

Clearing Operations Facilitated by well Designed Implements

Trewhella Bros. Implements have Increased in Popularity

STRENGTH is one thing, but accurately directed strength is another. The heftiest coal heaver could not necessarily hit a "sixer" at cricket as easily as a slim but well trained youth, who timed the stroke correctly. It is not the mere strength that counts, but also the knack of mechanical accuracy to develop the right precision.

"Getting the Pull" on a big stump with the Trewhella "Monkey" Horse Grubber.

Now, apply this in the realm of mechanical appliances. For instance, the Trewhella Implements have been designed so that they develop remarkable power, combined with ease of manipulation. The designs are patented throughout the world. They have a "knack" all their own which gives them distinctiveness. A powerful steam engine could not pull out a tree or stump with the ease or precision of a Trewhella implement.

These implements were designed to meet Australian needs in forest clearing: but their application has proved world-wide, and they have a ready sale for land clearing, stump pulling, etc., in New Zealand, England, Scotland, Europe, U.S.A., Canada, South Africa, the East Indies and elsewhere.

. . . . . .

Trewhella implements are made in varying sizes—to suit all needs. Fruitgrowers, farmers, land workers and contractors have a complete range from which to choose.

There are Jacks for various lifting operations, also implements for tree pulling and for grubbing out roots. Grubbing equipment is also available. For heavy lifts the "Monkey" jacks are splendid. The eight ton lift is exceptionally serviceable for grubbing out roots and stumps; the ten-ton lift has proved so universally valuable that it has come to be known as the King of Grubbing Jacks. This implement embodies all the good features of the other Monkey Jack, and it has in addition a number of improvements.

During clearing operations the weather is frequently wet. But if you have a "Monkey" jack there is no need for delay of any kind. The ground may indeed be too wet for using an ordinary jack or similar implement, but the "Monkey" grubber—possessing the "knack" for doing things—goes right ahead. No worry or fluster, and the work is performed with remarkable efficiency.

Again, this handy and well-designed implement can be used as a winch for very many purposes.

. . . . . .

For smaller lifts than those just mentioned, the desirable implements are available. Where logs have to be rolled or lands cleared of timber, "Wallaby" jacks are suitable,—these have lifting power of 2½, 4 and 6 tons.

Visitors to the Melbourne Royal Show are welcome to attend the demonstrations which will be given at the firm's stand, 91 Smith-street, Show Grounds.

"Out."—The Stump shown above successfully grubbed with the Trewhella Horse Grubber.

Codlin Moth Control.

Thoroughness in Spraying is Essential for Success.

Swift's Arsenate of Lead Retains Its Popularity.

CONSTANT VIGILANCE is necessary on the part of the fruitgrower to keep the codlin moth under control.

There is this satisfaction, however, that if the right spray mixtures are used at the right times, with thoroughness, clean crops are assured. Bad as the codlin moth is, much of the terror has been removed. In this connection the work of scientists is rightly praised. Studies into the life history of the codlin moth, both here and in U.S.A., have revealed many interesting facts: spraying programmes have been varied to suit modified conditions. New spreaders are being devised.

All this is good, but the basic control with arsenate of lead remains stabilised.

Although Swift's arsenate of lead has been on the market for 22 years, growers need no reminding of the fact that this was the pioneer "lead" in Australia. Its coming was hailed with enthusiasm, for it opened a new era in fruitgrowing—the use of an arsenical compound with no danger of burning the foliage or harming the developing fruit.

Yet although Swift's arsenate of lead was the first to come to the assistance of Australian fruitgrowers, the manufacturers who had been successful in evolving such a reliable compound were not content to rest on their laurels, but instead have continuously carried out intensive research work in the laboratory and in the orchard to not only keep their brand up to standard, but actually to improve it.

This accounts for the fact that Swift's arsenate of lead has retained its popularity over a long period of years. The aim of the manufacturers is to render service to the fruit industry—knowing that in the performing of this service they are building up an active goodwill and retaining the support of the growers.

Thoroughness Essential.

The manufacturers of Swift's, however, point out that the excellence of their sprays is only one aspect—an important one admittedly—but that the grower has his responsibility to take full advantage of the opportunity within his grasp. It is no use relying on the excellence of the brand. The work of spraying must be done intelligently and thoroughly. There is no other way for success.

Scientific research work is being carried out in various parts of Australia to determine the best and most effective times for spraying. Traps and lures are placed in the branches of trees to find when the moth is on the wing. The moth becomes active early or late in the spring, according to the temperatures. In warm weather the moth is on the wing early. Normally the first spraying is given about the time the petals of Apple blossom are falling.

The importance of getting rid of the first brood has long been emphasised by close observers. If the first brood be attacked with keenness and ability the foundation for a good control season is surely laid. Neglect of the first brood, however, means more labor and more expense to keep the pest in check throughout the season. The point which the manufacturers of Swift's desire to emphasise, however, is the excellence of their product. With good attention paid to the details of spraying, growers are reminded that in Swift's arsenate of lead they have an assured product with a great and uninterrupted record of service.

Leaf and Fruit-eating Insects.

The codlin is only one of the pests which are capable of being controlled by arsenate of lead sprays.

There is the "native codlin," the "light brown Apple moth"—a most destructive pest ,which operates in the same way as the imported codlin. This pest becomes particularly active as the autumn advances, necessitating sprayings to keep it in check.

This light brown Apple moth also attacks garden plants, Roses, Dahlias, and the like. Arsenical spraying is thus useful in the flower garden. When root borers ascend trees to eat the young leaves a spraying with arsenate of lead will poison them in thousands.

Other pests which are controlled by arsenate of lead include the Pear slug, the Orange moth, the painted Apple moth, vine hawk moth, Tomato moth, various beetles and borers.

Swift's arsenate of lead is useful not only to the Apple grower, but also to the citrus grower, vigneron, market gardener and flower lover.

In Western Australia, where is is no codlin moth, arsenate of lead is used freely to combat other leaf-eating pests.

The agents for Swift's arsenate of lead in the several States are as follows:—Rocke, Tompsitt & Co., 292-298 Flinders-street, Melbourne, Victoria; D. & W. Chandler Ltd., 290 Brunswick-street, Fitzroy, Victoria; E. & W. Hackett Ltd., 73 Rundle-street, Adelaide, South Australia; Harris, Scarfe & Sandovers Ltd., Hay-street, Perth, W.A; F. W. Heritage & Co., Hobart and Launceston, Tasmania; Anderson & Co., 399 George-street, Sydney, N.S.W.; Australian Drug Co. Ltd., Australia House, Carrington-street, Sydney, N.S.W.; Keep, Macpehrson Ltd., 252 George-street, Sydney, N.S.W.; Taylor's & Elliott's Ltd., Charlotte-street, Brisbane, Queensland.—(Advt.)

QUEENSLAND.

MARKETING LEMONS IN BRISBANE.

AN INTERESTING REVIEW of the Lemon market in Queensland has been sent to us by Messrs. Hedley, Geeves Ltd., growers' agents, Brisbane, together with a graph showing the estimated capacity of Lemon consumption in Queensland. Based on weekly quantities from 200 cases per week in September, the supplies should increase to 1,000 cases per week in mid-December, gradually receding to 250 cases per week at the end of March, and again increasing to 550 cases per week for the Easter trade.

During the winter, when consumption is lowest, Queensland grown Lemons are available at very low prices. The bulk of the Queensland Lemons are of inferior quality, in that they are generally too thick skinned, and are not powerful enough for squash purposes. It is noticeable, however, that one or two districts are producing a high-class article. The quantities are not large, but in view of the limited demand during the cool part of the year, it may be considered that Queensland can satisfy its own requirements from April 1 to September 1.

The main supplies of Lemons sold in the Queensland markets during the spring and summer seasons, from September to March, have been derived from Italy, South Australia and New South Wales.

The report states that for a considerable period very little profit has been made by the importers of Italian Lemons, because, although high prices are sometimes obtained for them, there have been occasions when losses have been very heavy indeed. The season just closed is a case in point. The first Italian Lemons to arrive here cost about 23/- to land. Sales opened at 35/-, but subsequently sold as low as 16/- after repacking, and after showing a very heavy waste. In fact, one shipment of Lemons was discarded at sea because the condition was so bad that the importer did not consider it worth while to pay the duty.

It is believed that the Australian grower can supply the Brisbane market with the necessary Lemon supplies. Messrs. Geeves state they are just as anxious to develop the trade for Australian growers now that the imported article is prohibited, as they were during the time that the Italian and American Lemons were coming to Australia.

"Lemons sent by Mr. A. W. Schwennesen, of Gonn Crossing, Vic., are properly cured and very satisfactory," continues the report. "An analytical examination of a sample of Italian, American, and Victorian Lemons has proved Mr. Schwennesen's to be the best of the three, both for juice contents, and what the trade here calls 'squash power.'

"Queensland has a population of 900,000 people. We estimate present consumption to be around 14,000 cases, that is allowing for the absence of Italian Lemons from the market.

"Excepting upon rare occasions, we suggest that Lemons should not rise above 20/- per case. Our own idea is that prices should spread from 13/- early in the season to 18/- during the hot period. Queensland is a growing State. There is no reason why, in a few years' time, growers should not send 20,000 cases of Lemons to Brisbane and receive a price for them which is payable."

GERRARD WIRE-TYING MACHINES.

Display at Melbourne Royal Show.

One of the principal features of the display to be made by the Gerrard Wire-Tying Machines Company at their pavilion in Lennon-avenue, at the rear of the Agricultural Hall, will be a comprehensive show of fruit packed for export in the latest approved method.

Demonstrations of fruit packing will be given each day by Mr. W. L. Gregory (late Assistant Packing Instructor of the Victorian Agricultural Department), who recently joined the Gerrard staff.

The exhibit will include all the latest ideas for the binding and sealing of every class of merchandise.

The Gerrard Company is now using high tensile wire, which is of considerably greater tensile strength than any other wire previously used for the purpose, allowing the maximum strain to be obtained without the risk of breakage. Canners and packers are now using this new wire for reinforcing the end of lug and picking boxes.

The Gerrard Automatic Tacking Machine is another "time saver" that should appeal to packers for securing labels to boxes.

The Victorian Trade Commissioner, reporting on the Apple cargo, ex "Tekoa" (8/3/30), stated:—

"It was quite nice to see that the greater proportion of the Apples were packed in the Canadian case, and these clean cases, wire-bound, with their various colored brands, looked very attractive. I saw no ullaged or broken cases on discharge; in fact, it was a great advance over previous years."

Do not run any Financial Risk with your Fruit
but Consign it to

HEDLEY GEEVES LIMITED

Telegraphic Address:
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(Hedley Geeves, Managing Director)
Registered Shipping No. 6.

FRUIT EXCHANGE——BRISBANE

SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

BALANCED MANURING will solve the problem!

and Nitrophoska exactly supplies these requirements.
Now is the time to apply Nitrophoska
a complete manure for all purposes.

NITROPHOSKA TELLS ITS OWN STORY.

NITRO — PHOS — KA

Nitrogen
16.0% {4.5% as Nitrate
{11.5% as Ammonia
Leaf and Stem Growth.
Larger Fruit.
Quantity.

Phosphoric Acid
16.5% (36% Tricalcic Phosphate)
Root Growth.
Blossoming.
Yield.

Kalium=Potash
21.5%
Health and Vigor to Leaf and Stem.
Sugar Formation.
Quality.

Read what others say of Nitrophoska

Dear Sirs,

RE NITROPHOSKA.

I have pleasure in stating I have used this complete orchard manure for the last three seasons, and have found it most satisfactory.

It has had a most marked effect on the growth of my trees, and a wonderful effect on the cover crop, which I grow to plow in the Spring.

Nitrophoska has the strength and quality to develop buds for the following season, in my opinion.

This year I had the best crop of Jonathans in the district, and attribute same solely to the use of this manure. I used about 5 lbs. per tree broadcasted, and it is a wonderful saving of labor where one complete Manure is spread in one operation.

I have a wonderful showing for the coming season, and have no hesitation in strongly recommending Nitrophoska to any Orchardist, as with its use success of crop is assured.

Yours faithfully,
(Sgd.) H. LAKE.
"Ivanhoe," Bridgetown, W.A.,
14th June, 1930.

Dear Sirs,

Please forward 4 tons Nitrophoska—August delivery.

I have had a very good result from the use of this fertiliser. This year my crop is a very heavy one in comparison with other years. The Navels will run out at over 300 cases to the acre. The fruit is also a brighter color and much firmer in the skin.

The orchard on which the Butter Factory stands was unsaleable two years ago on account of its hopeless condition. I used Nitrophoska on it last year, and the improvement has been wonderful. The trees have made good growth, and are a nice healthy color. The yield per acre on this block will be about 200 cases. Two years ago, less than that came off the whole seven acres.

For Citrus Trees I have obtained a far better result by the use of Nitrophoska than any other fertiliser.

Yours faithfully,
(Signed) A. H. SMITH.
Harvey, W.A., 1st June, 1930.

3 lbs. per full bearing tree, Costing from 7d. to 8d. per tree. In the Spring—NOW
1 ton is sufficient for 7 acres.

Limited Supplies *Literature on Application*

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Australian Dried Fruit.

DRIED FRUITS EXPORT CONTROL ACT.

N.S.W. Given Representation on Board.

FOR some considerable time the N.S.W. Dried Fruits Control Board has sought to have direct representation on the Dried Fruits Export Control Board. A Bill to amend the Act to provide for this representation was carried in both Houses on August 8.

Previously three representatives were elected by growers in N.S.W., Victoria, and South Australia, and one in Western Australia.

The amendment provides for two representatives to be elected by growers in Victoria and one each for N.S.W., South Australia and W.A.

It will be seen that the growers' representation on the Board has been increased by one. The object of giving two representatives to Victoria is that the average production of dried vine fruits in that State is greater than the aggregate production of the other States.

It is understood that steps will be taken at an early date by the Commonwealth authorities to amend the Dried Fruits (Election of Board) Regulations in order that the revised representation may take effect as from the next biennial election which will be held in about four months' time.

Under the present regulations a candidate for election as a growers' representative on the Board has to be nominated on the prescribed form and such nomination has to be signed by not less than 20 growers entitled to vote at the election.

AUSTRALIAN DRIED FRUIT OVERSEAS SALES.

ACCORDING to advices received by the Commonwealth Dried Fruit Export Control Board, 1,351 tons Australian dried fruits were sold in Great Britain during the week ending August 14, the value of sales being £51,360. Included in this total were 568 tons Currants, averaging £39/18/4 per ton; 101 tons new season's Sultanas at £52/1/8, and 658 tons old season's Sultanas at £34/3/4 per ton.

Shipments of this season's fruit now total 35,330 tons, as compared with 39,656 tons at the same date last year.

It is interesting to note that 5,169 tons new season's deliveries have been sold to date of last return, the average price realised being for Sultanas £53/10/2, Currants £42/14/10, and Lexias £41/12/3.

The carry-over from 1929 season is now recorded as 3,017 tons out of 50,155 tons shipped for the full season.

The Commonwealth Dried Fruit Export Control Board advise that during the week ending August 21, 976 tons dried fruits, valued at £37,300, were sold in Great Britain. These figures include 282 tons Currants, averaging £40/10/- per ton; 121 tons new season's Sultanas made £51/13/4 per ton, and 556 tons old season's Sultanas an average of £34/3/4 per ton. Carry-over stocks are now reduced to 2,454 tons.

Shipments of 1930 harvest amount to 36,285 tons, as compared with 40,283 tons at the same date last year. Sales of 1930 season's fruit to date amount to 5,586 tons.

DRIED FRUITS INDUSTRY.

Reduction of Costs Imperative.

Growers on "Marginal" Blocks Must Uproot Vines.

CONFERENCES of representatives of the Australian dried fruits industry, together with Federal and State Ministers, were held late in August.

A Boon to Vignerons!

THE SUNVINE
Mouldboard Plough

This specially designed implement will cut out the strip of ground beneath the vines that is left unploughed by the ordinary plough.

The Beam is turned so that Mouldboard and Share are set out on nearside, and the land is cultivated right up to the vine stems, while horse and man walk clear.

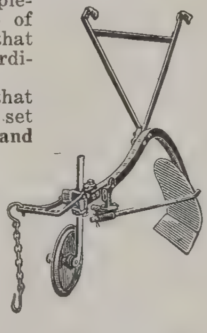
Cuts furrow to any reasonable depth and 10 inches wide.

A spring-mounted Fender Rod prevents the share from striking vine stems or posts.

Over 400 Sunvine Ploughs were sold last season.

Price only £4 5 0
Less 5 per cent. for Cash.
Delivery on Rails Sunshine, Sydney, Adelaide, or Perth

H. V. McKAY PTY. LTD.
Sunshine Harvester Works, Sunshine



-LEMONS-

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"BLACK LEAF 40"
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Melbourne, Sydney, Leeton, Newcastle Etc.

The necessity for reduced production costs was recognised as 80 per cent. of the crop had to be exported at world's parity. Growers on other than high-producing areas were advised to uproot the vines and go in for lucerne and dairying, etc. Reduction in costs were sought among suppliers of sprays, fertilisers and implements: reduced packing and selling costs were also necessary.

Committees were appointed to deal with various phases and the conference will resume about the end of October.

The sixth annual report of the Commonwealth Dried Fruits' Control Board emphasises the necessity for the continuance of the preferential treatment granted by Great Britain and the Dominions to Empire-grown fruits. It was expected that 44,500 tons would be exported to the United Kingdom in the 1930 season: this represents 34 per cent. of the average annual imports into Great Britain.

The prospects of trade with Eastern countries was not encouraging.

Effective Service to Fruitgrowers.

Lawford's Fruit Exchange Pty. Ltd., Doncaster, Victoria.

Cool Storage: Local, Interstate, and Overseas Marketing: Orchardists' Supplies.

THE activities of Lawford's Fruit Exchange Pty. Ltd., of which Mr. E. I. Lawford is managing-director, combine with the packing, storage and marketing of fruit, the merchandising of goods especially relative to fruitgrowers.

On the fruit side of the business, a well equipped packing shed and 16,000 cases cool store, under the same roof, deals with the produce of the several orchards of Lawford & Zerbe. In addition to the fruit from these orchards, fruit is obtained from other orchards to supply the special trade with the East, N.S.W., and Queensland, coastal and inland towns, which has been built up over a number of years, by strict attention to packing and grading, and faithful attention to the requirements of each customer.

Also the company has arrangements overseas for the sale of growers' consignments, which are proving most gratifying to those growers who are so far in a position to draw a comparison.

Pinus insignis cases are manufactured on the premises, a very fine type of case being produced. The logs are cut into flitches, which are stacked out in the weather and allowed to become thoroughly seasoned, the boards being then run off these flitches as required. Clean, strong, light cases are the result.

On the merchandising side of the business, in addition to a full range of orchardists' requisites, such as spraying material, lime, wrapping paper, woodwool and carrugated strawboards always in stock, this firm is continually testing various lines from all parts of the world, and from time to time places on the market lines which they have proved to be of special value to orchardists. Two of the latest articles to be introduced are "Fluxit," the new spreader, and "Fixator" and "Crystol-85," the Australian made white oil emulsion, made from pure refined paraffin oil.

Analyses of photographs of the skins of Apples sprayed with arsenate of lead alone, arsenate of lead with calcium caseinate spreader, and arsenate of lead with "Fluxit" respectively, show that not only does "Fluxit" spread the lead evenly over the fruit, as compared with uneven spots deposited when no spreader is used, but it also "fixes" practically double the lead on the fruit, as when calcium caseinate spreader is used. This extra lead adheres just like a bloom on the fruit, and is most readily removed if necessary.

Over 16 tons of "Fluxit" was used in Australia last season, notwithstanding that it was first introduced only in the spring, and growers everywhere speak highly of their results with it.

"Crystol-85" is designed for the safe spraying with oil of all trees and plants in full foliage, to control all scale insects on citrus and deciduous trees, red spider, Peach and Cherry aphis, and in conjunction with the arsenate of lead programme, for smothering codlin moth eggs before they hatch. It is much lower in price than the imported white oil emulsion.

"Applim" agricultural lime, which is distributed by this firm over practically the whole of Victoria, is guaranteed 95 per cent. calcium carbonate, and is as fine as flour. Being put on rail at Footscray, the cost of freight to most parts of Victoria is less than from most other sources of lime.

"Schloesings" French Prepared Bordeaux Powder, was introduced to orchardists some few years ago, and is now extensively used throughout Victoria with success. Growers now have great confidence in this preparation and appreciate its saving of time at low cost.

"Quitite" patent spray hose clamps, which the company manufacture, and of which Mr. E. I. Lawford is joint patentee, are now used practically throughout Australasia and New Zealand.

Lawford's special spray hose is the result of years of experimenting to perfect a reasonably light hose of great strength and absolutely dependable. This hose is tested in 1,500 lbs. pressure at the works, and in actual work has stood up to 600 lbs. pressure.

The knowledge of orcharding which Mr. Lawford possesses, and the facilities immediately at hand for testing anything new in actual use, place this company in a unique position to determine that before placing anything new on the market, it possesses some features definitely superior or valuable. Upon this being proved the article or material is adopted for use in the orchards of Lawford & Zerbe, and placed on the market for the use of all orchardists. Unless special value or usefulness is proved, the article or material is discarded.—(Advt.)

THE SPORTSMAN'S PRAYER.

The following is a copy of the "Sportsman's Prayer," which hangs in the King's private room at Sandringham.

Teach me to observe the rules of the game;
Teach me neither to cry for the moon, nor over spilt milk.
Help me to distinguish sentiment from sentimentality,
cleaving to the one and despising the other;
Help me neither to proffer nor receive cheap praise.
If I am called upon to suffer, let me be like a well-bred
beast who goes his way and suffers in silence.
Teach me to win when I may.
If I may not win, then above all
I pray, make me a good loser!

The Sugar Enquiry.

Discussion at Public and Fruitgrowers' Meetings.

A MEETING of the Executive of the Sugar Consumers' Association was held at Temple Court, Melbourne, on August 28. Mr. F. Hagelthorn presided. Representatives were present from the Grocers' Association. The Housewives' Association, Fruitgrowers' Associations, and several public bodies.

The Secretary of the Housewives' Association, Miss Robinson, stated that whilst recently at Kyabram, in the Goulburn Valley, she had, on mentioning the campaign against the Sugar Embargo, met with a hostile reception. It seemed as if there were a section of the fruit canning industry in favor of the embargo.

Mr. W. A. Thiele (Doncaster), expressed surprise that any section of the fruit industry should favor the continuance of the sugar embargo. Certainly the adverse sugar price had hit the jam-fruit growers very hard—not only as regards the jam-fruit for factories, but for housewives, too.

The resolution carried at the recent public meeting condemning the sugar embargo, was unanimously reaffirmed: committees were appointed to secure evidence to be given before the Sugar Enquiry Committee, and to conduct an active campaign against a renewal of the Sugar Agreement. Meetings would be held in metropolitan and country districts.

Discussion at Victorian Fruit Marketing Association Meeting.

The subject of the Sugar Enquiry was dealt with at the monthly meeting of the Executive of the Victorian Fruit Marketing Association, Mr. E. I. Lawford presided.

A letter was read from the Prime Minister, stating the scope of the Sugar Enquiry Committee, and requesting the Association to communicate with representative Australian fruitgrowers' associations to secure a joint nomination of a representative of the fruitgrowers.

The Chairman reported that the Emergency Committee had met: requests had come in from interstate and Victorian fruitgrowers' associations, that the services of Mr. R. E. Boardman be made available, and giving the reasons for their choice.

It had been decided to send a copy of the Prime Minister's letter to representative Australian fruitgrowers' associations, together with nomination forms: further, that a letter be sent to these associations embodying the reasons which had been advanced for the inclusion of Mr. Boardman on the Sugar Enquiry Committee, and commending his services.

The results were as follows:—Mr. Boardman was nominated by the N.S.W. Fruitgrowers' Federation, Tasmanian State Fruit Advisory Board, Tasmanian Farmers, Stockowners and Orchardists' Association, Tamar Farmers and Fruitgrowers' Association, Port Huon Fruitgrowers' Co-op., South Australian Fruitgrowers and Market Gardeners' Association, South Australian Fruit Marketing Association, West Australian Fruitgrowers' Association, Federal Citrus Council.

In Victoria the associations which had nominated Mr. Boardman or supported his nomination, were Southern Fruitgrowers' Association, Jam and Canning Fruitgrowers' Association, the Fruitgrowers' Cool Stores Association, also the Associations at Doncaster, Diamond Creek, Mt. Waverley, Harcourt, Tyabb and Silvan.

The Committee of Direction of Fruit Marketing, Brisbane, had nominated Mr. W. Young, of Toolamba W., Victoria.

The statement had been published that Mr. Young was appointed.

Mr. Griffeth stated he understood that the Australian Canning Fruitgrowers' Association had nominated their Secretary, Mr. Young. This Association embraced a large number of canning fruitgrowers in the Goulburn Valley and Murrumbidgee irrigation areas. Mr. Young was an appreciated fruitgrower and an able man.

Mr. Webb (Doncaster) stated he had been advised that several Queensland and N.S.W. fruit canners were in favor of a continuance of the Sugar Embargo.

Mr. Bailey: "I am sure Mr. Young is opposed to the Sugar Embargo."

Mr. Webb, continuing, said he considered the jam-fruit growers should be represented on the Sugar Enquiry Committee: also there was the aspect of the housewife, whom he believed used far more sugar in home jam making than did the factories. Factory and home-made jam consumption had heavily declined, because of the unduly high sugar prices. Five out of the six States had nominated Mr. Boardman to represent them. The other states had entered their protest against the present appointment. He moved that the Victorian Fruit Marketing Association also enter its protest.

After discussion, Mr. Webb agreed to alter his motion to read: "That the Federal Government be requested to add Mr. R. E. Boardman to the Sugar Enquiry Committee."

Mr. H. Ford (Harcourt), seconded, and the motion was carried.

GOODMAN'S FRUIT TREES

41 Years Leadership
place Goodman's Nurseries first in Australia for Reliable Trees and Supreme Values.
Many of the heaviest bearing and most profitable orchards in the land, had their beginning in Goodman's Famous Nurseries.

PLANT NOW
Apples, Apricots, Peaches, Cherries, Pears, etc., etc. All varieties in strong, healthy, well-grown Trees.

WRITE FOR NEW FREE CATALOGUE.

C. J. GOODMAN PICNIC POINT NURSERIES BAIRNSDALE

QUEENSLAND FRUIT IN MELBOURNE.

THE TOTAL TONNAGE of Queensland fruits which arrived per special fruit trains at Melbourne during the month of August, was 1,434 tons of Bananas. Pineapples, Custard Apples, Passion Fruit, Granadillas, Poorman's Oranges, Sugar Cane, Tomatoes, Papaws, Sweet Potatoes, Mangoes. The Melbourne manager of the Committee of Direction (Mr. C. Parnell), advises that the organisation also handled extra Queensland boats of weekly consignments of Strawberries. Approximately 350 tins containing on an average of 18 boxes were received during August. The Strawberries are meeting with a ready sale and prices are reasonable.

Banana prices have gradually decreased, present prices being:—Special 20/- to 21/-, choice 19/- to 20/-, standard 14/- to 18/-, and plain 9/- to 13/-.

It is regrettable that there are present a certain amount of Bananas which are affected with "squirter" or black centre, which trouble, ripeners are unable to control.

The market for Pines has also decreased, prices at present being from 8/- to 11/-.

The supply of beans has decreased owing to adverse weather conditions in Queensland, a considerable number of growing plots being washed away by the heavy rains. Prices have improved, and at present the general average would be 4d. to 7d. per lb., with odd lots realising higher prices.

Papaws.—At present there does not appear to be a suitable carrier for Papaws arriving on the Southern market. The present method of conveying in Pineapple cases allows the fruit to move about and become bruised. Anyone who would bring forward a suitable case which would convey matured and colored Papaws to the Southern market in a satisfactory manner, would earn the gratitude of Queensland growers. Prices for colored Papaws at present are from 12/- to 14/- per case, but green Papaws are hard to sell and prices range from 8/- to 10/- per double case.

PREVENTION OF MOULD WASTAGE IN ORANGES.

Gentle Handling is Imperative.

EXPERIMENTS were recently conducted in South Africa regarding the prevention of mould wastage in Oranges, by Mr. V. A. Putterill, M.A., F.L.S. The details are given in an interesting Bulletin issued by the Department of Agriculture of the Union of South Africa. The experiments are described which were carried out to ascertain the efficacy of dipping Oranges in a 5 per cent. borax solution as a preventive against mould wastage.

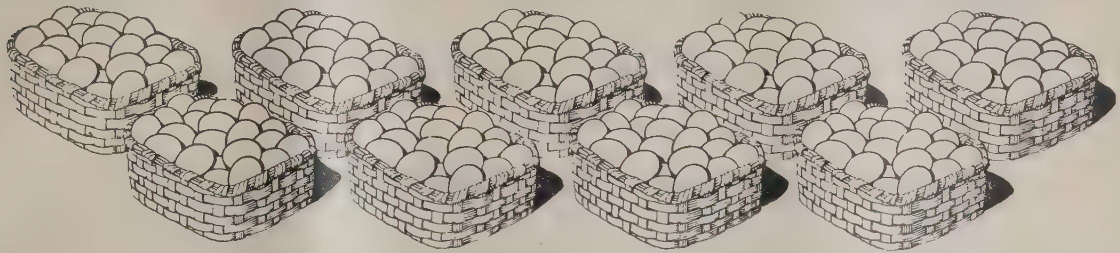
As a result of these experiments it was concluded that **the borax treatment** can only be considered as an adjunct to careful handling. Where fruit has had to be brushed for scale, or where conditions obtain under which the fruit is likely to receive more damage than usual, the borax treatment might be used as a precautionary measure.

This treatment, moreover, should prove of considerable value when used on fruit which has shown itself to be very susceptible to mould attack. For example, fruit grown in certain localities appear to possess less resistant properties than fruit in other districts.

Before you Finalise
Your spraying programme for 1930/31
CONSIDER the time and labor-saving
advantages of dusting for EFFECTIVE
PEST CONTROL
EFFECTIVE G.B DUSTS
Complete Dusting Schedule
Posted Free on
Application.
Niagara
Dusters
The best of
ALL
GIBBS, BRIGHT & CO
27 Grenfell St.
Adelaide
Also sold in Small tins for Home Gardens

Karswood

means Increased EGG Production



With almost monotonous regularity, the leading men in the public life of the country keep telling us that half our troubles would be solved if we only produced more. "Produce—produce—produce," is their exhortation, and there is a very sound reason behind it. For greater production means reduced costs of production, and it is only by reducing the costs of production that Australia will be able to compete in oversea markets.

And the production of eggs is no exception. If you obtain a greatly increased number of eggs for an infinitesimal increase in cost, you have reduced your costs of production, and are thus better able to meet a fall in price if it occurs. And if prices are up, then it is so much extra in your pocket. Karswood Poultry Spice increases egg production to an amazing degree, but it obtains its results in a perfectly natural manner. It does not force, because it contains no forcing ingredients, but gently coaxes the birds to more active laying. A half-pound packet, costing 1/–, supplies 20 hens for 16 days.

"The Best Egg Producer on Market"

Dear Sir,

I have been a user of Karswood Poultry Spice for some years and cannot speak too highly of it both as a tonic and egg producer. I am convinced that it increases the production, especially in the winter when the weather is so changeable. I am sure Karswood is the best egg producer on the market and will always recommend it.

Yours faithfully,

(Sgd.) F. J. HARRISON, Beaconsfield,
South Fremantle, W.A.

"Wonderful Addition to Birds' Diet"

Dear Sir,

Although as yet I am only in a small way, having only a dozen W.L. pullets, I certainly do think your Spice is a wonderful addition to the birds' diet. I am getting eggs now, when no one around has them, and everyone remarks how well my birds look. Last year with only seven pullets I averaged 5 eggs daily for months which is very good, most of the birds laying 6 eggs a week, and one used to lay her 13 each fortnight for a long while.

(Sgd.) Mrs. A. W. DREW,
Briagalow, Queensland.

"The Best Egg Producer I Have Ever Used"

I have been using Karswood Spice for about two years and find it the best egg producer I have ever used. I have been getting eggs from my fowls when my neighbours' fowls are moulting when eggs were 3/6 a dozen. You can make whatever use you like of this letter as I would like others to benefit by using Karswood. *Yours faithfully,*

(Sgd.) M. PHELPS, 19 Commercial Rd.,
Brighton, South Australia.

"Wonderful Help in Rearing Chicks"

Dear Sir,

I have used your Poultry Spice for nearly two years and have found it a wonderful help in rearing chicks. I gave it to my white chicks at a week old and found they matured quicker and were finer and healthier than without it. The same chicks came on to lay at 5½ months, which I consider very good and laid throughout the summer. I think this a good proof of the splendid properties of Karswood. You may use this testimonial as you think fit. *Yours faithfully,*

(Sgd.) J. ELBOURN,
c/o A. Hannams Private Bag,
1/6/29 *Liverpool.*

A Convincing Test

I have been using Karswood Poultry Spice for the last four years. I keep about 300 Poultry, half of them free range and the other half on the intensive system. The ones on the intensive system are in five different compartments of 30 birds in each, all white Leghorns, equal in type and age. The three compartments Karswood fed, in three months average;

Jan. 601 per compartment 30 birds
Feb. 589 " " " "
Mar. 565 " " " "

Two compartments without Karswood Spice average for same period;

Jan. 397 per compartment 30 birds
Feb. 325 " " " "
Mar. 298 " " " "

A reduction of 735 eggs.

Sgd.) W. UNSWORTH, Thomas Estate,
20/5/29 Shepparton. Victoria.

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half a dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/- packet supplies 20 hens for 16 days;
2/- packet supplies 20 hens for 32 days;
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

6.M.30

"To Choose the Best is Wisdom"

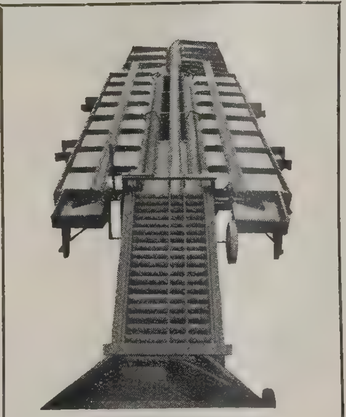
The Lightning Fruit Grader Co.

will hold their usual demonstration
at the

Royal Show, Melbourne

September 18th to September 27th, 1930

Stand No. 65, Plummer Avenue



Three Quality Sizer
Model 17

PACKING EQUIPMENT.

to interest every fruitgrower will be shown and demonstrated daily, and at our factory we will hold further demonstrations of Citrus Processing Machinery, where we will be pleased to show you the complete process.

Make our Stand your meeting place and invite your friends to see you there You will always be assured of a welcome. All interstate growers particularly invited.

We are now situated in our new spacious factory, which is specially laid out and well equipped with up-to-date and modern machinery necessary for the successful manufacture of fruit packing equipment.

The Address is—

517 Albion St., West Brunswick
N.12, Melbourne

Poultry Notes for September.

IN a bulletin issued by the Department of Agriculture, Victoria, the following hints are given on chicken feeding and rearing:—

* * *

Prior to hatching, the chicks absorb the yolk, which supplies them with their first nourishment, and they should on no account be fed until this yolk has been digested, otherwise indigestion, leading to bowel trouble, is likely to occur.

* * *

Fine grit and charcoal should be provided for them when they are first put into the brooder and for 48 hours after hatching.

* * *

From two to five days the feed should be a little rolled oats or crushed hulled oats mixed with coarse sand and powdered charcoal; from five to seven days crushed hulled oats and finely ground wheat, sand and charcoal.

* * *

From seven to ten days crushed hulled oats, ground wheat and ground yellow maize, and at this time a dry mash of bran, one part, and the flour from the crushed oats, wheat and maize, one part with the addition of a little powdered charcoal and coarse sand, should also be given.

* * *

For the next few days there need be no change in the feed save that to the dry mash from 3 to 5 per cent. of dried buttermilk, may be added.

* * *

When the chicks are from fourteen to 28 days old a little wet mash may also be fed.

* * *

Where infertile eggs have been taken from the incubators a good wet mash can be made by mixing raw egg with the bran and drying it off with the flour from crushed oats, wheat and maize.

After about the 28th day a little pollard can be used in the wet mash.

* * *

At Werribee no pollard is given to chickens till they are four or five weeks old.

* * *

From the time chickens are three days old milk can be given them, but it is advisable to give it always in the same condition, either sweet or sour.

* * *

If given sweet one day and sour the next, it is likely to give them diarrhoea.

* * *

They should always have plenty of water.

* * *

Minced raw onions should be fed once a day after the chickens are seven days old, and finely cut green stuff should always be before them.

* * *

If a grass run is not available, grass sods should be cut and put in for them.

* * *

For those who do not care about the trouble of mixing, excellent proprietary chick feeds are on the market.

* * *

Greenstuff should be chopped up very finely, and fed as freshly cut as possible.

* * *

On no account should it be allowed to ferment.

* * *

Two cardinal points to be observed in poultry-rearing are :(a) guard against chills, and (b) study digestion.

* * *

The value of portable colony houses for rearing chickens is not fully realised by a large number of poultry-keepers, and there is no doubt that, if it were better understood, it would be far more extensively adopted.

H. V. McKAY PTY. LTD.

Exhibit at Royal Show, Melbourne.

The exhibit of H. V. McKay Pty. Ltd., at the Royal Show, Melbourne, this year, is of much interest to orchardists and vignerons, including as it does a wide range of modern implements.

The "Sunvine" mouldboard plough. This is a low-priced little implement designed to cut out the strip of ground beneath the vines that is left unploughed by the ordinary plough. The beam is turned so that mouldboard and share are set out on the nearside, and the land is cultivated right up to the vine stems, while horse and man walk clear.

"Satellite" Horse Hoes.—These are all metal with expanding and contracting frames, so that they work between rows of plants any width apart. Points, shovel points, and mouldboards are supplied, and the implements are unequalled for hilling, trenching, or cultivating between rows of plants.

The Sunshine Power Spraying Plant consists of a 2 h.p. Sundex Petrol Engine, direct geared to a Sunshine Power Pump, and mounted on a sturdy four-wheeled transport carrying a vat of 100 gallon capacity. This modern plant gives good service, and has ample power for supplying two spray rods at high pressure.

Space will not allow of detailed description of the many types and sizes of mouldboard and disc ploughs, harrows, tyne cultivators, seed planters and fertilisers, chaffcutters, etc., etc., exhibited by Messrs. H. V. McKay Pty. Ltd. Visiting fruitgrowers should not fail to inspect this display of Sunshine manufactures, Stand No. 82, just inside the entrance gates from railway station.

Balanced Manuring is offered in the preparation Nitrophoska, which contains nitrogen, phosphoric acid and potash. This preparation is offered by Messrs. Henry H. York & Co., 573 Lonsdale-street, Melbourne. Readers are referred to their advertisement in this issue, which contains interesting information, including appreciations from users, also details as to the constituent proportions of Nitrophoska. The quantities recommended are 3 lbs. per full bearing tree, costing from 7d. to 8d. per tree. One ton is sufficient for seven acres. The present spring time is most suitable for application.

Let us try to make our lives like songs, brave, cheery, tender, and true, that shall sing themselves into other lives, and so help to lighten burdens and cares.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS. EXPORTERS, Advertising in this Journal.

NEW SOUTH WALES.

Sydney:
Chilton, F., City Fruit Markets.

VICTORIA.

Melbourne:
Andrew, Fred. J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
McLean, N. N., Pty Ltd
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
Silbert, Sharp & Davies, Western Market.
Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.

Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.
Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.

London:
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.
Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.
Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers.
Johnson, T. S., & Co.
Bristol and Southampton:
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.
Glasgow:
Russell, Turnbull & Co.

FRANCE.

Scheiber, E., Paris.

GERMANY.

Bremen:
Fruchthandel, Gesellschaft.
Hamburg:
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.

Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

Great Britain.

London (10/7/30).—Tasmanian Apples, ex "Bendigo," "Chitral" and "Trojan Star," showed waste and scalded fruit. Best colored varieties brought 6/- to 7/6 per case, best Sturmers 8/- to 10/3, inferior 3/- to 6/-. Many cases of Pears were wasty and were condemned.

Plums from Italy were sold the same day, but their condition was wasty. Italian Tomatoes were also of poor quality. Peaches brought 4/4 for 40 fruits. Spanish Plums sold at 3/10 per 26 lbs.; Apricots 3/- to 5/-.

Hull.—A special consignment of fruit was sent to Hull during April by the Batlow Packing House (N.S.W.), by the "Port Hunter." Mr. H. Broadfoot, of the N.S.W. Department of Agriculture, accompanied this consignment, which arrived on June 5. With the exception of some Pears of the Beurre Bosc and Flemish Beauty varieties which were in very forward condition, the whole consignment carried well. It was unfortunate that the boat was held up for two weeks at Adelaide, as this enabled other steamers to catch up to the "Port Hunter," thus meeting with competition.

Prices were as follow:—Pears (Canadian bushel case), L'Inconnue 12/3 to 15/3, Bosc 16/3, D'Anjou 13/- to 16/9. Pears (half bushel), Winter Bartlett 6/6 to 7/3; L'Inconnue 6/9 to 7/3, W.N. 7/6 to 12/-, Bosc 8/9 to 12/-. Apples (Canadian bushel case), Jons. 11/6 to 12/9, Granny S. 14/- to 16/9, Statesman 13/-, Cox's 20/- to 24/-, Londons 10/6 to 11/9, Dunn's 12/-, King Davids 10/6 to 10/9, Romes 11/6 to 12/-.

Had the "Port Hunter" arrived on time, it is believed there would have been an increased price of 3/6 per case all round.

Liverpool.—Messrs. J. C. Houghton & Co., fruit brokers, Liverpool, report under date July 1, that Tasmanian Apples ex "Stirlingshire" realised low prices. N.Z. Apples, ex "Hereford," quality good, sold slowly. A few Del., G.S., and Dougherty, obtained better prices, but proportion was small. Prices:—Tas. Cleo. 5/9 to 8/9, Jon. 5/3 to 8/6, S.P.M. 5/- to 7/6; N.Z., Sturmer 6/6 to 9/6, Del. 8/- to 12/-, G.S. 14/- to 16/6, Jon. 7/3 to 11/6, Dougherty 11/- to 12/-.

Personal.

Mr. H. G. Colombie, President Victorian Fruit Marketing Association, is returning from the Continent, via America on the "Sonoma." Mr. Colombie is due in Sydney on September 11, and is expected in Melbourne a few days later.

AUSTRALIAN FRUIT IN HOLLAND.

Report from Rotterdam.

THE Algemeene Vruchten Import Maatschappij, N.V., Rotterdam, Holland, report under date June 11, that the shipment of 45,000 cases of Tasmanian Apples ex s.s. "Natia," was unfortunate in arriving almost on top of the "Port Bowen." Sales were delayed until after the extended Whitsuntide holidays. Apples sound, excepting London Pippins. Jonathans sound, many rusty. Too much small fruit. Some parcels contained 50 per cent. of 2¼. Shippers should send their small fruit to England where it is in better demand than on the Continent, especially Holland. Many packages were slack packed.

Prices:—Tas. Jons. 8/- to 10/-, 8/3 to 11/9, Dunns 7/6 to 11/3, S.A. Jon. 8/6 to 10/9, Rome 8/- to 9/6, Cleos. 8/9 to 11/3, Dunns 9/6 to 13/-, L.P. 7/6 to 9/6.

Classifications.—Regret is expressed because of the wide discrepancies between the specification, and the actual landing of the fruit.

New Zealand.

Dunedin (14/8/30).—Messrs. Reilly's Central Produce Mart, report prices as follows:—Tomatoes, local 1/9, 2/1; Apples, Del. 8/-, 13/-, Jons. 6/-, 8/-, Sturmers 7/-, 10/-, cooking 5/6, 8/-; Pears, W. Coles 10/-, Nelis 10/-, 12/- half cases 3/6, 5/-; American Valencias, 42/6; Navels, N.S.W. 13/-, 15/- Victorian 13/-, 15/-; Mission Lemons 58/-, Australian 25/-; Grapefruit 42/6, Australian 16/-; Poorman Oranges 10/- to 12/6; Passions 22/-; Pineapples, choice Queens 22/6, 24/-; Bananas, choice ripe 25/-, 30/-; Mandarins, choice 12/- to 15/-.

Sydney, 21/8/30.—Mr. F. Chilton, City Fruit Markets, Sydney, reports prices as follows:—

Queensland Fruits.—Bananas, 12/- to 21/- per case; Pines (Queens), 9/- to 11/-; Tomatoes, 3/- to 5/6 per half-case.

N.S.W. Fruits.—Bananas, 12/- to 21/- per case; Oranges, commons 3/- to 5/- per bus., navels 6/- to 8/-; Grapefruit, 5/- to 10/-; Sevilles, 3/- to 5/-; Mandarins, 2/6 to 6/-; Lemons, 4/- to 5/-; Apples, G.S., 8/- to 14/-; Pears, Packham 8/- to 11/-, Jos. 8/- to 11/-; Passions, 6/- to 12/- per half-case.

Victorian Fruits.—Apples, Jon., 6/- to 10/- per bus.; Pears, Packham 7/- to 11/-, W.C. 6/- to 10/-, Jos. 7/- to 11/-.

Tasmanian Fruits.—Apples, Tasma (Democrat) 7/- to 11/- per bus., Crofton 6/- to 10/-, Jonathan 5/- to 10/-, S.P.M. 5/- to 10/-, N.Y.P. 4/- to 10/-, F.C. 6/- to 10/-; Pears, W. Cole 6/- to 10/-, Easter Beurre 4/- to 7/-.

Apples, Pears and Pineapples of good quality and popular sizes are in fair demand. Citrus fruits generally have been over-supplied to a very poor demand, but as spring weather will shortly make its presence felt, a slight improvement may be expected soon. Extra large or small sizes and inferior qualities of all kinds of fruit are practically unsaleable.

Victoria.

Melbourne (30/8/30).—The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market yesterday for average quality fruit:—Apples: Good to choice eating, 3/6 to 8/-; cooking, 4/- to 7/-. Bananas: Green Queensland, special, 20/-; choice, 19/-; standard, 14/- to 18/-; plain, 9/- to 13/-. Lemons, good quality, to 9/-; special higher. Mandarins, 4/- to 8/-; special higher. Oranges: Common, bulk, 3/- to 5/- a case; Mildura, to 6/-; Navel Oranges, 4/- to 8/-; selected lines higher; Poorman Oranges, Queensland, 9/- per case. Pineapples, Queens, 9/- to 10/- per double case. Papaws, colored, 12/-; green, 8/- to 10/- double case. Grape Fruit, bulk, 8/- to 10/- per case; selected lines higher. Tomatoes, repacked, 7/- to 9/- per half case.

The Melbourne manager of the Federal Citrus Council of Australia reports that sales were as follow:—Average standard shed pack Navel Oranges, 6/- a case; a few to 7/-; faulty packs lower; good South Australian and best Victorian, 6/- to 9/-; some wrapped, 7/- to 10/-; a few selected lines higher; a few Common Oranges, 4/- to 7/-; Mandarins, best counts, to 8/-; a few specials higher; small and wasty, from 3/-. Lemons, medium sizes, 180-248, to 9/-; a few specials higher; small or marked, from 5/-. Grape Fruit, average standard grade, 8/- to 10/-; a few selected lines, 14/- to 18/-; some higher. Poormans, medium sizes, 8/- to 10/-. Sevilles, medium sizes, 8/- to 10/-; small, from 5/-.

Queensland.

Brisbane (29/8/30).—Victorian Pears: W.C. 10/- to 11/- per case, W.N. 9/- to 11/-, P.T. 9/- to 11/-, Keiffers 7/- to 8/-; Apples: Jon., 2½ in. to 2¾ in., 8/- to 9/-; odd sale at 10/-; 2¼ in., 7/- to 8/-; 2 in., 5/-; Statesman, 5/- to 7/-; R.B., 5/- to 7/-; F.C., green, 9/- to 11/-, small 5/- to 7/- per case. Pears from Tasmania of the W.C. class, 5/- to 10/- per case. Oranges, special 6/- to 8/- per case, inferior 5/-; Mandarins, Glens, 7/- to 14/- per case; Scarlets 5/- to 10/-, Emperors 9/- to 13/-, Feutrels 5/- to 9/-, Kings, Excelsiors and Waratahs 7/- to 10/-; Navels 8/- to 11/-; Lemons 1/- to 3/6; Grape Fruit, 2/- to 4/- per case; Passionfruit 3/- to 8/- per case; Custard Apples 3/- to 5/- per case; Papaws, colored 4/- to 5/- case, green 1/- to 2/- per dump.

Tasmania.

Hobart (30/8/30).—Apples: S.T.P. 3/- to 6/-, F.C. 2/6 to 5/-, Del. to 7/6, Democrats 3/6 to 8/-, N.Y.P. 3/6 to 7/-, S.P.M. 3/- to 8/-, Aromatics to 4/6, C.E. 2/6 to 4/3, Statesman 3/- to 4/6, Small Pears 1/6 to 3/- half case.

South Australia.

Adelaide (23/8/30).—Apples, eating 4/- to 5/- case, cooking 3/- to 3/6; Lemons 6/- to 7/-; Oranges, Common, 6/-, Blood 7/-, Navel 9/- to 11/-, Poorman 5/- to 6/-; Pears, eating 6/-, cooking 3/-.

Western Australia.

Perth (21/8/30).—Apples: Dunn's, dumps 9/- to 13/-, R.B. 9/- to 12/-, Yates 12/- to 16/- (others from 10/-), Granny S. 11/- to 15/6, Cleos. 8/- to 12/-, Doherty 8/- to 12/-, others 8/- to 13/6. Citrus: Navels, flats 5/- to 10/-, dumps 7/6 to 15/-; Lemons 4/- to 7/6 (special to 9/6, inferior from 2/-); Mandarins, flats 3/- to 11/-; Oranges, plain, flats 4/- to 6/6, dumps 6/- to 9/6.

Unbreakable Glass Substitute

"WINDOLITE"

which admits the health-giving Ultra-violet Rays (ordinary glass does not). Of immense value to gardeners and others for seed frames, ferneries, glass houses, handlights, bloom and plant protectors. Keeps out frost and cold biting winds; admits the sunshine and the **growth promoting** rays; prevents scorching and drawing of plants.

Use **Windolite** for verandahs and sleep-outs, in factories, for poultry pens and brooders, and wherever glass gets easily broken. Light, flexible, easy to cut and fix. Stocked by Jas. McEwan & Co. Pty. Ltd., D. & W. Chandler Ltd. (and at Fitzroy); Myer Emporium Ltd.

Retailed in 36 inch width at 9/- sq. yd.

Australian Agents: **C. H. Leaver & Co., 524 Collins St., Melbourne.** Send for sample.

Tasmania.

Port Huon Co-operative.

THE annual meeting of the Port Huon Fruitgrowers' Co-operative Association Ltd., was held at Hobart on August 26.

The annual report of the Chairman (Hon. W. H. Calvert, M.L.C.), covering the Association's affairs to June 30, 1930, included the following items:—

Property.—During the year an extension was made to the cool store at Port Huon, giving now a total storing capacity of 110,000 cases, with improved facilities for packing; land was also acquired at Margate, on which was erected an up-to-date packing shed to meet the requirements of this district. The total value of the land, buildings, and machinery now stands in the books at £38,693, after providing for depreciation to the extent of £10,717/12/9, of which £997/2/5 was written off during the current year.

Capital.—The paid-up capital has increased to £20,207/6/4, there being 103 new shares subscribed during the year. Reserves amount to £5,973/11/11, and the profit and loss account shows a credit of £204/7/6.

Overseas and Interstate Markets.—Many difficulties had to be faced in regard to the overseas shipments on account of the heavy crop and the short tonnage available; your Association having to guarantee its allotted proportion of the space in the chartered and berth tonnage engaged.

The General Manager, Mr. J. P. Piggott, M.H.A., proceeded to England in March last, and is now actively engaged in the company's interests in England and on the Continent, and should, on his return, have knowledge which will be invaluable to the Association.

The usual regular services have been well maintained between Huon ports and Sydney-Brisbane-Newcastle, with the advent of a new and up-to-date oil-burning steamer, the s.s. "Talume" being engaged in the Sydney trade.

Small Fruits.—It will be noted that the stocks on hand amount to £25,253/8/6, this being mainly made up of fruit pulps which, owing to the depression prevailing, buyers have been taking deliveries against contracts in very small quantities. Overseas markets are also at a low ebb, and stock pulps in London are moving very slowly.

LAUNCESTON FRUIT EVAPORATOR.

Destroyed by Fire.

The premises of the Northern Evaporting Co., Launceston, were destroyed by fire on August 26.

The main building destroyed contained approximately 2,500 cases of evaporated fruit. About 100 cases of woodwool and much valuable equipment were destroyed.

Conferences of Tasmanian fruitgrowers were held at Hobart and Launceston, during August. Meetings were largely attended, and many important matters ventilated. It was decided to request that the export of plain grade Apples be permitted to continue.

Further details next issue.

HOP MARKETING.

Control Board Rejected.

The proposed Control Board for hops was rejected recently by the Senate. Mr. H. Ashton Warner, President of the Tasmanian Agricultural Bureau, stated that Tasmanian growers strongly opposed the measure.

New South Wales.

Leeton and Griffith Areas.

THE ORANGE CROP on the Murrumbidgee Irrigation Areas this season is approximately 360,000 cases (Griffith 180,000 cases and Leeton 180,000 cases).

The following is a list of the fruit packing sheds which are operating: names of managers are given in parenthesis:—

Leeton.—Producers' Distributing Society (Wm. Alpen), Yanco Producers (Mr. Bevan), Carlson's (Mr. Carlson), Leeton Packing Co. (Mr. Johns).

Griffith.—Griffith Producers (Mr. Vagg), O'Briens (Mr. O'Brien), Mirrool Packing Co.

Bulk loading has been introduced, and this means a considerable saving in freight to growers.

Mr. Carlson, Leeton, is making every endeavor to bring his packing shed up to a high standard of efficiency. He has installed nine fruit brushes, with the latest lightning Grader. The pack, as forwarded to Melbourne, will stand comparison very favorably with any other packs.

The quality of fruit from these areas is in advance of other years.

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Abbotsford, Vic.

Tasmanian Agents—
N. L. HOPKINS, HOBART.

Green Manuring.—Growers are getting on with the planting of tick beans. They have found these beans to be a fine asset in a manurial capacity. They can be seen in various stages up to 18 inches high.

Picking and Packing are in full swing. The pruning of the deciduous fruits is just about completed, and the show of buds augurs well for a fine crop, particularly stone fruits.

Export of Oranges.—Griffith producers, through the N.S.W. Wholesale Fruit Distributors' Association Ltd., have opened up a new channel for the disposal of their citrus crop. They will ship something like 40,000 packages to Canada. Shipments have been arriving in first-class condition, and the prices have been satisfactory. It is pleasing to see the optimism shown by some of the growers, for the future of the citrus industry. Quite a number are planting up fresh patches.

Mr. John Hetherington's orchard at Wamoon, near Leeton, comprises mostly Citrus and Peaches. The Citrus crop is excellent as regards quality and quantity. Remarkably heavy crops of Pullar's Cling Peaches were harvested last season.

Tick beans are grown for working in as green manure.

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BANANA GRADING.

Amended Regulations in N.S.W.

AMENDED BANANA GRADING regulations have been gazetted in N.S.W. Cavendish Bananas have four grades, as follows:—"Sixes" (consisting of Bananas not less than 5½in. but less than 6½in. in length and 4in. in circumference); "sevens" (not less than 6½in. but less than 7½in. in length and 4in. in circumference); "eights" (not less than 7½in. but less than 8½in. in length and 4¼in. in circumference); and "nines" (not less than 8½in. in length and 4¾in. in circumference).

For the purpose of the regulations, the length of a Banana means the length measured on the outside of the curve from the junction of the fruit at the stem end to the apex of the fruit, and the circumference means the greatest circumference.

For Lady's Finger and Sugar Bananas, three grades are provided, thus:—"Fives," consisting of fruit not less than 4½in. but less than 6in. in length and 4in. in circumference; "sixes," not less than 6in. but less than 7in. in length and 4½in. in circumference; and "sevens," not less than 7in. in length and 4¾in. in circumference. The regulations provide that Bananas can only be packed in the above grades. Other provisions are that there must not be more than one per cent. of foreign matter in the package, Bananas must be sound and free from fruit fly. The variety and grades must be clearly marked on packages.

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The Mechanical Analysis of Soil.

(A PAPER READ BEFORE THE ST. LUKE'S HORTICULTURAL SOCIETY, VERMONT, BY MR. F. BROWN.)

THE MECHANICAL ANALYSIS is different from chemical analysis as any average person can carry out the mechanical, whereas only a chemist could carry out the chemical analysis. Chemical analysis is unnecessary for the average horticulturist, whereas mechanical analysis may be made use of by all, and is really necessary for all garden lovers to know.

Utensils Required.

It is unnecessary to purchase anything in the way of apparatus, all that is required is:—A frying pan or sheet of iron; a bucket or kerosene tin; one 2-lb. jam jar; one 1-lb. jam jar.

Composition of Soils.

Soils vary in their composition, some contain stones, sand and clay, others just sand and clay, whilst there are some merely sand or merely clay.

Everything depends upon how much or how little of the sand, stones or clay there is in the composition, and whether the soil is of a stoney, sandy or clayey nature, also much depends upon the nature of the soil as to the plants most suitable for a given plot of soil, for instance: Roses would do best on strong soil (clay), whilst Carnations desire a lighter soil, and so on.

Soil composed of sand, termed sandy, contains 80 per cent. to 95 per cent. sand, and 5 per cent. to 20 per cent. clay.

Sandy loam, 60 per cent, to 80 per cent. sand, and 20 per cent. to 40 per cent. clay.

Loam, 40 per cent. to 60 per cent. sand, and 40 per cent. to 60 per cent. clay.

Clay loam, 20 per cent. to 40 per cent. sand, and 60 per cent. to 80 per cent. clay.

Clay 5 per cent. to 20 per cent. sand, and 80 per cent to 95 per cent. clay.

We now have a table upon which to work and place a given quantity of soil under the right heading.

Method of Finding.

It is a very simple method to find the exact composition of a given quantity of soil. If a small plot is to be analysed, take the larger jam jar and place in it ten (10) ounces of soil and fill jar with water, stir up the soil and allow to settle for a few moments, then pour off muddy water into kerosene tin and repeat until the water becomes clear. Allow water in the kerosene tin to remain undisturbed for 24 hours, then gently pour off—dry contents of jar and tin and weigh. The difference in the weights will indicate the class of soil under test; the jar will contain sand and the kerosene tin clay; should the soil contain stones these must be taken out and weighed.

Lime.

As most horticulturists are aware, lime is most necessary in the soil, for, by its presence, it sweetens soils and helps to make heavy (clay) soils workable, and it also rectifies acid formations. Lime is essential to the bac-

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teria in the soil, as without it the bacteria is hindered in its functioning.

To Test for the Presence of Lime.

The simplest method is by the use of red litmus paper, which is obtainable from most chemists. It is made up into book form at the cost of 4d. per book, and contains about eighteen (18) leaves.

Take a sample of soil in a moist state and in its place one of the leaves of red litmus paper; should there be lime in the soil, the red litmus paper turns blue; again, if this paper comes in contact with ammonia, it turns blue as with lime, but with applying gentle heat, the paper returns to its usual color.

Another test is with hydrochloric acid, better known as "spirits of salts."

Place a small quantity of soil in a jar and add water until contents are of creamy nature, now pour in one ounce of the acid, and if a brisk effervescence takes place there is sufficient lime presence, but, if no change takes place, lime must be added. Keep the acid in a glass-stoppered bottle owing to the corrosive nature of its fumes.

Acid Soils.

Acid soils are generally sour and damp and plants placed in same soon turn yellow and die. The acid is taken into the plant through its roots, and becoming crystalised, begins to collect in the cell tissues of the plant, gradually it chokes the flow of sap in much the same way as snow falling into a drain, will, in time, stop water from passing.

For this kind of soil applications of lime are necessary to rectify the acid.

Method of Testing.

Take a piece of blue litmus paper and carry out the method as for a lime test, should there be acid present the blue litmus turns red. This paper is also obtainable from most chemists at the cost of 4d. per book.

Humus.

Humus is absolutely necessary in all classes of soil, it makes heavy soil lighter and the light soils heavier by reason of its water-holding properties. Sandy soils (to which humus has been added) will hold and retain moisture much longer than soil devoid of humus.

To find the amount of humus present in the soil, take a given quantity of soil in a dry state, and after weighing place on a sheet of iron (an old frying-pan will serve the purpose) over a fire and burn until red hot. After allowing to cool, weigh again and the loss in weight denotes the amount of humus that was present in the sample taken.

AUSTRALIAN FRUIT EXPORT COUNCIL.

THE RESOLUTION at the recent Australian Fruitgrowers' Conference at Hobart in favor of an Australian Council to determine export matters, is widely approved.

There is at present a lack of effective co-ordination between the States with regard to the shipping programme and the quantities to be lifted at the various ports.

A conference of delegates from the various States is shortly to be called, and it is hoped that all matters connected with Australian fruit export will be adequately dealt with in order that the present overlapping can be done away with.

FRUIT FOR MANCHESTER.

The importance of Manchester as a distributing centre for fruit, is becoming more fully recognised. Publicity work is conducted by the Manchester Fruit Marketing Information Bureau, 324 Deansgate, Manchester, England.

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THE CANNED FRUITS CONTROL BOARD advises the total quantity of canned Peaches (halved and sliced) and Pears processed in Australia during the 1929-1930 season. Allowing for quantities in 30oz., 21oz., and 16oz. containers, the equivalent in doz. 30oz. tins was as follows:—Canned Peaches, halves 1,419,952, sliced 807,579; canned Pears, 787,791. The total pack, Apricots, Peaches, and Pears (equivalent in doz. 30oz. tins), 3,569,829.

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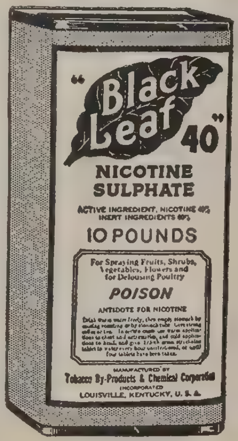
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Read what the Government Expert Reported:—

From the report of A. A. Hammond, Esq., Senior Supervisor, Horticultural Division, Dept. of Agriculture, Victoria (page 16):—"The Apples, however, sprayed with VOLCK combined with arsenate at a strength of 1 gallon to 100 gallons of water, and later with 1½ to 100 without arsenate, were outstanding. The fruit matured ten to twelve days before the fruit on other plots, and the skin was brighter, cleaner, and more highly colored. The fruit on plot G, sprayed with ORTHOL-K, also matured earlier, but it was not so bright in appearance as the fruit sprayed with VOLCK."

(Also page 17):—"Volck oil, it would seem, repelled the moth or prevented it from recognising its hosts, as it was noticeable that fewer eggs were deposited on the fruit which had been sprayed with this oil."

Read what the owners of the tested orchards say:—

From Mr. H. G. Petty, Templestowe, whose Apple Orchard was the scene of another VOLCK success in a Government conducted test:—

"I have used your oil ORTHOL-K in combination with Arsenate of Lead on all my Apples during the past season. Results have been excellent, the fruit and foliage being particularly bright and clean. Codlin Moth infestations have been negligible—the lowest yet experienced. The most gratifying result of using the oil is the reduction in the number of stings and the complete control of Red Spider. THIS ALONE, I CONSIDER, WARRANTS THE USE OF YOUR OIL AGAIN."

From Mr. W. A. Thiele, Church-road, Doncaster, in whose Pear Orchard the Government Expert conducted the other official 1929-1930 Codlin Moth Control Test:—

"I wish to mention that I found your oil entirely satisfactory when used in combination with Arsenate of Lead for the control of Codlin Moth, and would like to mention particularly that the VOLCK oil gave **superior results to any other oil used in the orchard.** The fruit in the test block, treated with VOLCK OIL and Arsenate of Lead, was outstanding above all others, and I would strongly recommend this oil, but on no account to use it for more than two or three applications."

For further "Official" evidence of the effectiveness of VOLCK — read

Journal of Agriculture, Aug., 1928, page 461.

Journal of Agriculture, Sept., 1929,

Journal of Agriculture, Oct., 1929, pages 596-8.

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Owing to one of our competitors objecting to us publishing the whole of the official figures in connection with the tests carried out by manufacturers and others under the supervision of the Agricultural Department, we wish to refer orchardists to the July, 1930, issue of the "Victorian Journal of Agriculture," where full details are published.

NOTE—Elephant Brand Sprays gave the highest percentage of clean fruit at the lowest cost of application.

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THE SUGAR ENQUIRY.

THE Committee appointed by the Federal Government to enquire into the sugar industry, is expected to commence duty about the middle of this month. There was some delay because of the regrettable illness of Mr. A. R. Townsend, accountant of the Trade and Customs Department—one who has given years of study to the sugar industry.

Mr. C. J. Matthews, who was appointed to represent the fruit processing industry, resigned on account of ill-health, and Mr. Dutton was appointed in his place.

* * * * *

There were many expressions of regret that the one nominated by the majority of fruitgrowers' associations throughout Australia was not appointed to represent the fruit industry. This, however, is a matter for which the Federal Cabinet must be held responsible.

Mr. Young, of Toolamba W., Victoria, who was appointed to represent the fruit industry, is an esteemed fruitgrower. It is to be hoped that fruitgrowers' associations are actively in touch with Mr. Young, and are preparing evidence to be put before the Committee.

* * * * *

The impression is pretty general among the public that the Sugar Enquiry Committee is overweighted with sugar interests: also the terms of reference are so wide that a much longer time than that appointed would be necessary to effectively do the work. Again, the evidence is not to be tendered on oath, and no counsel is permitted to attend on behalf of the interested parties.

However, despite these limitations, the enquiry is welcomed, and it is hoped that much good will be the outcome. It is, of course, open for a minority report to be presented should this course be found desirable.

U.S.A. APPLES.

Commercial Crop About Same as Last Year.

Crop Heavier on U.S. Pacific Coast.

THE coming U.S.A. Apple crop is expected to be about the same this year as in 1929, according to a report issued on August 1 by the U.S.A. Department of Agriculture at Washington, D.C.

The commercial Apple crop in 1929 was 86,919,000 bushels: the 1930 forecast is for 86,892,000 bushels.

The States of Washington and Oregon produce the fruit which comes into competition with that from Australia. In this connection it is important to note that the Washington crop is expected to be lighter than last year. In 1929 the commercial crop was 24,900,000 bushels: the 1930 crop is expected to be about 23,457,000 bushels, or a reduction of 1,443,000 bushels.

The foregoing figures are from the official crop reports, though we note the Seattle correspondent of the "New York Packer" gives his opinion that the Washington crop will be somewhat heavier than last year. Further advices to settle these conflicting views will be published next month.

In the meantime it appears certain that the crop in Oregon will be very much heavier than in 1929 (one of the lightest years on record). In 1929 the crop was 2,250,000 bushels: the 1930 crop is estimated at 4,809,000 bushels—more than double.

This is because of the greatly increased crops in the famous Hood River Valley.

VICTORIAN FRUIT MARKETING ASSOCIATION.

Annual Meeting.

THE annual meeting of the Victorian Fruit Marketing Association was held at the Board Room, Temple Court, Melbourne, on September 26, the chair being taken by the President (Mr. H. G. Colombie).

Experimental Orchard for Gippsland.—Mr. J. M. Ward (Superintendent of Horticulture) stated it was not possible at the present tibe to arrange for an experimental orchard in Gippsland (as requested by the last annual meeting), desirable though the project might be. The country's finances were very strained at present. The Government had secured 104 acres in the Goulburn Valley, to be subsequently utilised as an experimental orchard. Mr. Ward further stated that cultural experiments were being carried out in several Gippsland orchards.

The annual report was read by the Secretary, detailing the year's activities. Much valuable work had been accomplished. The report was received and adopted, on the motion of Messrs. Webb and Cave.

Softwood Cases.—The Chairman congratulated the Association on its successful activities regarding softwood cases during his absence. The Association had done good work in preventing the proposed embargo. Unquestionably the softwood package was preferred on the English market. Tighter packing with the bulge was necessary. Similar packages from America and Canada contained about 4 lbs. more fruit than similar packages from Australia.

It was decided, on the motion of Messrs. Brown and Eagle, to organise in conjunction with the other exporting States a deputation to the Minister for Customs, requesting that softwood shooks be permitted entry under item 404 10 per cent. ad val., instead of it being necessary to pay the full 5d. per case (refundable) duty.

1931 Apple Export.—Mr. J. B. Mills reported having attended a shipping conference in Sydney. Owing to the rationalisation programme for co-ordinating the programme of steamers for lifting the fruit crop, it would be necessary for accurate crop forecasts to be prepared and for progressive reports to be obtained as the season advanced. It was very important to form an Australian Fruit Export Advisory Council to deal with Apple and Pear export from an Australian point of view. Report received.

Financial Statement.—The audited financial statement was presented, showing credit balance at the bank of £172/10/9. The Chairman reported that there was approximately another £250 yet to be received. The statement was received and adopted, on the motion of Messrs. Brown and McLean.

Death of Mr. Edwin Lawford.—The Secretary reported that Mr. Edwin Lawford, a highly esteemed grower, had recently passed away, and a letter of sympathy had been sent to Mr. E. I. Lawford, Vice-President, and to relatives. The Secretary's action was endorsed.

Mr. Webb spoke in terms of great appreciation of the services rendered to the industry by the late Mr. Edwin Lawford.

Imperial Preference.—Senator R. D. Elliott attended by request, and spoke of the growing sentiment in England in favor of Empire unity and Imperial preference. England imported £500,000,000 worth of products annually, of which £301,000,000 came from foreign sources. Great Britain's fruit imports were £38,000,000, of which £25,000,000 came from foreign sources.

It was decided, on the motion of Messrs. Thomas and Bailey, to send cables as follows to Lord Beaverbrook: "That this meeting of primary producers congratulates you and the Empire Crusaders on the fight you are making to develop the resources of the Empire, and pledges itself to every action that would support you and make reciprocal action possible.

Cable to Mr. Scullin.—"That this meeting of fruitgrowers urges you to support the proposal for Empire preferential trade and the imposition of a duty on foreign grown fruit, or the declaration of a closed period for the sale of Empire fruit."

Australian Fruitgrowers' Organisation.—Mr. E. J. Mulvaney, Secretary, Commonwealth Department of Markets, stressed the necessity for an Australian-wide organisation of fresh fruit exporters. Control Boards were now operating with regard to canned fruits, dried fruits, dairy produce, etc., but it had been impossible so far to get united opinion from the fresh fruit producers. A Control Board for the Tasmanian fruit industry had been suggested, but this would be difficult to operate without effective co-operation with the other States.

Address by Mr. Clapp.—Mr. H. W. Clapp, Chairman of Commissioners, Victorian Railways, gave an appreciated address at the luncheon. He urged continued close cooperation between the fruit industry and the Railways Department. Growers should standardise their products and adopt up-to-date means of salesmanship and advertising.

THE PORT OF LONDON.

Reduction in Charges.

Reductions in port charges in London to the extent of 5 per cent. of the foreign inward and outward rates, are announced as from September 1.

These reductions are estimated to save users of the port £120,000 per annum, which brings the total reductions in port charges effected since 1925 to an annual sum, including the relief passed on by the Authority under the Government de-rating scheme of £942,000.

The total tonnage of vessels that used the Port of London during the 12 months ended March 31 was over 58,500,000 net registered tons.

QUEENSLAND STRAWBERRY GROWERS.

Deputation Objects to C.O.D. Control.

THE Queensland Minister for Agriculture (Mr. Walker), told a deputation of Strawberry growers on September 15 that they were free to sell their fruit in any way they desired except to canneries. The Committee of Direction would retain control of supplies to canneries. Strong criticism was voiced by growers in regard to the restrictions imposed by the C.O.D. The deputation was introduced by the Treasurer, Mr. W. H. Barnes.

Mr. H. Randall presented a petition signed by a large number of growers objecting to control by the C.O.D. The deputation asked that the Order in Council, giving the C.O.D. control of the crop should be rescinded.

Details of losses incurred by the action of the C.O.D. were given by several speakers.

Mr. Walker, in reply, said he had received a report from Mr. Ranger, Manager of the C.O.D., showing that in the past four years the number of Strawberry growers had increased from 180 to 630, and the present prolific crop had resulted in the market being glutted. To rescind the Order in Council might result in the disorganisation of the market. He would, however, remove the restriction which required growers to sell only to the C.O.D. or to one specified agent.

Mr. Steele.—That will give us relief right away.

The Minister promised to go further into the matter to assist in devising some means of finding further outlets for the crop.—Brisbane "Courier."

NORTHERN TASMANIAN FRUITGROWERS.

Conference in Launceston.

IN accordance with usual practice, a Conference of Northern Tasmanian fruitgrowers was held under the auspices of the State Fruit Advisory Board on August 14, thus closely following on a Conference of Southern growers held in Hobart. There was a large attendance, the chair being occupied by the Chairman of the State Fruit Advisory Board, Mr. B. J. Pearsall, M.H.A.

In moving the adoption of the annual report, the Chairman said that two matters of outstanding interest were the appointment of a Royal Commission and the Imperial Conference in London. There should be more reciprocity between Australia and the old country. It was necessary that Australia's primary products should go to England, and in turn, some of the manufactures of that country were needed here.

On the motion of Mr. Neil Campbell, M.H.A., seconded by Mr. B. Saunders (Hillwood), decided to confirm the motion carried at Hobart, authorising elections for members of the State Fruit Advisory Board to be conducted through the Agricultural Bureau.

Apple and Pear Export Bounty.—On the motion of Mr. H. K. Gerrard, it was decided to request the Federal Government to grant an export bounty of 1/- per bushel on all standard grade Apples and Pears exported overseas during the next three years. This motion was carried by 37 votes to 14, and was in opposition to the resolution carried at Hobart.

Several resolutions carried at Hobart were reaffirmed at the Launceston meeting.

It was decided, on the motion of Major Broome and Mr. Astell, to recommend decentralisation of shipping: boats should call at N.W. ports.

The Case Question.—A report was requested as to the comparative merits of the pine and hardwood cases; and, if necessary, to send a representative to England to enquire.

Softwood Cases.—Conference decided, on Mr. Taylor's motion, to request that softwood case material be admitted under tariff item 404, under guarantee of export.

New Markets.—Arising out of a motion from the Spreyton Agricultural Bureau, it was decided to request the Advisory Board to consider the matter of new markets, with special reference to Mr. J. Astell's insurance proposals.

Beauty Point Cool Storage.—On the motion of Mr. Neil Campbell, M.H.A., it was decided to ask the Advisory Board to ascertain the practicability of establishing cool storage at Beauty Point—a land or floating store.

TASMANIA.

State Fruit Advisory Board.

THE TASMANIAN State Fruit Advisory Board met at Hobart on September 27, Mr. B. J. Pearsall, M.H.A., presiding.

The programme drafted by the Agricultural Bureau for the election of officers was approved.

Empire Preference.—Correspondence was read from Federal Ministers—Mr. Lyons (Postmaster-General), Mr. Parker Moloney (Minister for Markets), assuring the Board that its representations regarding Empire preference on fruit would receive every consideration.

Held Over.—Letter from F. G. Pattel, Brisbane, re the sugar industry.

FRUIT FLY LURE.

Success in Western Australia.

In a report by Mr. L. J. Newman (Economic Entomologist), Department of Agriculture, West Australia, "Clensel" is recommended for use as a lure in trapping the fruit fly. A further luring test has been made with "Clensel" during the past six months, which proved effective.

Growers should go ahead with baiting, trapping, and daily destroying any infested fruit, for one pair captured now is worth thousands in February or March. This lure should be used at the rate of 1 part to 30 parts of water, and glass jars or tins with a capacity of ½ pint should be hung in Loquat, citrus and other fruit trees coming into flower and foliage. There should be at least two traps per tree. The traps should be hung in a sunny position until mid-October, and then hung in the shade. The lure should be renewed every eight or 10 days, half-filling the trap. The distributor for "Clensel" in Australia is Mr. Bruce Anderson, 54a Hoddle-street, Abbotsford, N.9, Victoria.

N.Z. FRUIT EXPORTS.

New Zealand's Apple and Pear exports reached the total of 1,330,891 cases in the 1930 season. The details (supplied by Mr. J. A. Campbell, Director of the N.Z. Horticulture Division), are as follows:—

Apples and Pears Exported, 1930 Season.

Apples.—Great Britain, 904,916 cases; Continent of Europe, 186,987; Sweden, 1,250; South America, 160,541; Canada, via East Coast, 13,823; Vancouver, 3,964. Total Apples, 1,271,481.

Pears.—Great Britain, 38,972; Continent of Europe, 16,000; Sweden, 1,000; South America, 3,223; Canada, 215. Total Pears, 59,410.

THE PORT OF MANCHESTER.

The importance of Manchester as a market for Australian and New Zealand fruit is emphasised by the Australasian representative of the Manchester Ship Canal Co. (Captain Wade), who points out that a population of 13,000,000 people is readily served by this port, and that the unloading, handling and marketing facilities are of an exceptionally high standard.

Wheat growers in New South Wales and Victoria, by their votes, rejected compulsory pooling.

* * * * *

Tomatoes arriving in Melbourne from Western Australia during early September, showed much waste. The Tomatoes came in the cool chamber. Many of the consignors will show a loss on their transactions.

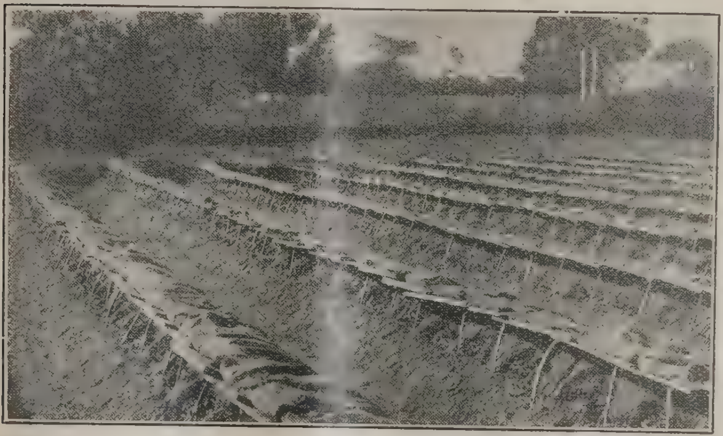
THE PASSING OF THE PIONEERS.

Mr. Edwin Lawford, Doncaster.

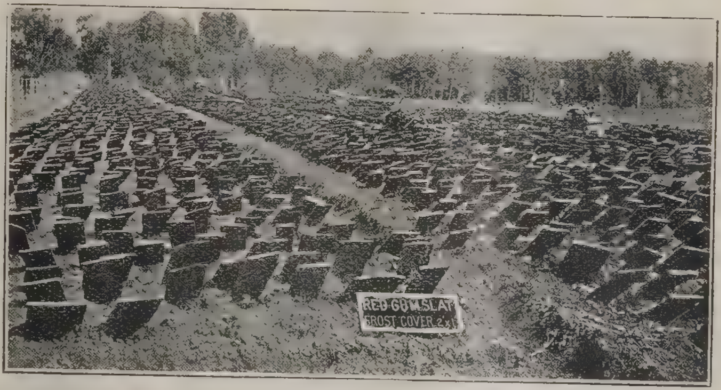
We regret to announce the death of Mr. Edwin Lawford, of Doncaster, a pioneer fruitgrower, and one who was held in the highest esteem. Mr. Lawford was a successful Pear grower, and became one of Australia's authorities on Pear culture. He took an active interest in district affairs and matters affecting the welfare of the industry, and his passing is greatly regretted: he has, however, left behind him a record of honored service.

Tomato Culture

Interesting Illustrations from Bulletin 26, issued by the Victorian Dept. of Agriculture.



Tomatoes covered to protect from Frost, Chinese System, Echuca.



Tomatoes covered to protect from Frost, European System, Bendigo.

NEW MELBOURNE MARKET.

Opening in November.

THERE is considerable activity among fruit producers and the fruit trade because of the erection of new markets at Melbourne.

These new markets have been provided for members of the wholesale fruit trade, which are at present accommodated at or near the Western Market. There are 60 stores arranged in six blocks, containing ten stores each and fronting Peel, Franklin and Queen streets.

The stores have concrete floors and have been designed with ample light and ventilation.

Facilities are provided for ready delivery, inwards and outwards of produce.

CODLIN MOTH CONTROL.

The article, "Codlin Grub Instinct Challenges Science," by Mr. J. F. Littooy (on pages 384-6 of this issue), appears to open up a new and wide field for investigation to discover means and knowledge for combating codlin.

What Mr. Littooy writes is based on what has been learned in the course of research work in connection with Fluxit Fixator, as an accessory material for use with arsenate of lead.

It is that heavy, evenly distributed, bloom-like coverage brought about by the use of Fluxit Fixator as an accessory with arsenate of lead, that should give the efficient control of the codlin that Mr. Littooy points to as attainable.

It would be a step that might give results of tremendous benefit to Apple and Pear growers, for experiments to be conducted under official observation in Australia with a view to ascertaining the relative efficiency for codlin control of the spot type of arsenate spray, the spread film type, and the heavy fixed type. Also to determine the minimum deposit of arsenate required to be maintained on the fruit to give maximum efficiency in protecting against codlin.

At present in Australia there appears to be no data available in this connection, and sprays are applied at times, of strengths and of types decided on largely by guess on the part of the grower, sometimes with success, and sometimes with very disappointing and seemingly unaccountable lack of success, involving loss of part of the grower's crop of fruit.

Mr. Littooy's article appears to point out the lines along which experiments would be most likely to give much valuable data now entirely lacking.

Victoria.

Notes and Comments.

The Marketing Bill.

This Bill was generally objected to by most sections of fruitgrowers.

Meetings were held at Harcourt, Doncaster, Mt. Dandenong, and other places, when resolutions condemning the measure were unanimously carried.

It is understood many citrus growers desire an "Enabling Bill" to control their industry by legislation; for this purpose it would be possible to draft a short Bill embodying the essential provisions.

* * * * *

At Harcourt a meeting of the Harcourt branch of the Victorian Fruit Marketing was recently held. Mr. H. Ford presiding. Mr. H. M. McLean was elected Chairman of the Executive, together with Messrs. H. Ford and K. Eagle, delegates.

Mr. H. G. Colombie (President, V.F.M.A.), who had just returned from abroad, gave an interesting review of marketing abroad. Mr. J. B. Mills, Vice-President, capably outlined the successful activities of the Association. A resolution condemning the proposed Marketing Bill was unanimously carried.

* * * * *

Pear Export.

Mr. W. A. Webb presided at the September meeting of the Doncaster Fruitgrowers' Association. Delegates attended from surrounding districts to hear a first-rate address on the marketing of Pears in England by Mr. F. J. Garford, of Mitcham.

Berry Fruits.

A large number of growers met on September 27 at a meeting of the Mt. Dandenong branch of the United Berry Growers' Association. The proposed prices of all berry fruits for the coming season were discussed, and recommendations will be sent on to the united body for consideration.

It was reported that the General Secretary had visited the principal centres of the State, and had established a number of agencies, where country orders will be booked. The operations for direct distribution in the suburban area would be extended, and it was confidently expected that consumers would be supplied in greater quantities than before.

The Marketing Bill was unanimously condemned as uncalled for, and adverse to the producers' interests.

Pest Control.—The President (Mr. Jeeves) stated that close observations and study were being continued by the officers of the Department of Agriculture at the experimental research farm, and that experiments for the extermination of the cockchafer grub and other pests were proceeding.

Preparations for 1931 Export.

Under the auspices of the Victorian Fruit Marketing Association, questionnaires are being sent to growers to obtain progress reports of the developing Apple and Pear crops.

* * * * *

Owing to the rationalising programme for steamers, it is certain that every effort will be necessary to secure accurate forecasts of the export quantities, in order to co-ordinate the export trade and secure maximum efficiency and elimination of overlapping.

Royal Agricultural Show.

THE annual show of the Royal Agricultural Society, held at Melbourne September 17 to 26, was a great success. There were thronged attendances, despite gloomy forebodings because of the economic depression.

The exhibits were up to their usual high standard. The show is of great educational benefit to the man on the land, also to the general public, in bringing home the vital importance of our primary industries.

In the fruit section the exhibits were many and varied. The Agricultural Department had some valued educational displays—a model grading machine and packed cases of Oranges and Apples, showing various counts. Citrus growers were asked to note that the best counts for Oranges were 140, 126, and 112.

In the Government Pavilion there were also some delightful exhibits of dried and canned fruits. The arrangement of the dried fruits display by the Victorian Dried Fruits Board was dainty and attractive. Canned fruit was shown from the factories at Shepparton, Ardmona and Kyabram.

On the whole, the extent of the fruit display was disappointing. The Royal Show provides a wonderful opportunity for advertising the Victorian fruit industry. There could have been many more entries in all the fresh fruit sections—particularly Apples, Pears and citrus—and growers and their organisations would do well to remember to bear this in mind for the future.

The question has been raised as to desirability of granting two sets of prizes for Pears. After judging, some of the fruit has a tendency to become discolored, and visitors on the later days of the show are liable to get a wrong impression. The idea would be to give a prize for the Pears which hold up best throughout the show.

In the Apple-packing competition, open to pupils of State schools attending the classes conducted by the Department of Agriculture, there were 71 entries, and the value of these classes was amply demonstrated. The winners were the Harcourt North State School, with Tyabb Lower a close second. Harcourt North thus holds the handsome shield presented by the Victorian Fruit Exporters' Handling Committee. In individual packing the prize-winners were Noel Edwards, Tyabb Lower (1); Hope Bertuch, Harcourt N. (2); Les. Thompson, Pakenham Upper (3).

In the competitive section, Mr. J. D. Grant secured first and second in the Orient Company's competition for Apples. The Apples were neatly wrapped and packed under the brand of the Tyabb Co-operative Cool Stores Co. Mr. L. M. Watt was third.

Among the Apple exhibits, Mr. W. G. Whicker displayed high quality Dunn's, Londons and Stewarts; Mr. L. M. Wall, Tyabb (Rome Beauty, etc.); Pryce May, Diamond Creek (Delicious, Fameuse, Jonathan, etc.).

Other prize-winners included Two Bays Nurseries & Orchards Co., J. Tainton & Sons, G. W. Peart, K. Cleine, P. W. Laurissen.

In the Pear section, Messrs. W. A. and A. E. Thiele had excellent exhibits of Josephines, B. D'Anjou, etc.; Mr. W. G. Whicker displayed Packhams, D'Anjou, etc. Other successful exhibitors were P. May and J. Tainton & Sons.

The citrus exhibits were very attractive. The Mildura District V.C.C.A. secured first prize for a collection of citrus under their Big Four Brand. The exhibit included Oranges—W. Navel, Valencia Late, Joppa, Parramatta, St. Michael, White Siletta, Golden Nugget Navel, Mediterranean Sweet, etc.; Mandarins—Emperor Beauty of Glen Retreat; Lemons—Eureka, Villa Franca, etc.; also Citrons, Grapefruit, etc. The whole was neatly arranged in the form of a pyramid. The Murrabit Citrus Growers' Association secured second prize. The fruit was of high quality, and the exhibit had the merit of distinctive skill in arrangement. Instead of the formal pyramidal design the fruit was gracefully arranged in baskets, effectively linked with ribbons. The Oranges were of the following varieties:—Washington Navel, Parramatta Seedling, Jaffa, Michael (common and paper rind), Queens, etc.; Triumph Grapefruit, Lemons, Limes, etc. The fruit was displayed under the Association's Blue Ribbon brand. At the top was a neatly written sign bearing the words: "Murrabit Citrus Growers' Association," which could be seen from a distance. In the exhibit a neat card was displayed giving a few bright details as to the establishment and development of the district.

Other awards in the citrus section were:—Oranges, Washington Navel: Irymple Packing Pty. Ltd., 1; E. F. Page, 2; A. R. Smart, 3. Late Valencia: Irymple Packing Pty. Ltd., 1. Mediterranean Sweet Queen, White, Siletta, Joppa or Jaffa: A. R. Smart, 1; Irymple Packing Pty. Ltd., 2. Lemons (Fresh), Lisbon, Eureka (Sweet Rind) or Villa Franca: Irymple Packing Pty. Ltd., 1; L. A. P. Webb, 2; A. R. Smart, 3. Cured: E. F. Page, 1; L. A. P. Webb, 2; Murrabit Citrus Growers' Association, 3. Pomelo or Grape Fruit: E. F. Page, 1; Irymple Packing Pty. Ltd., 2; Murrabit Citrus Growers' Association, 3. Mandarins: E. F. Page, 1; Irymple Packing Pty. Ltd., 2; Murrabit Citrus Growers' Association, 3.

Export Packing Competition.—Irymple Packing Pty. Ltd., 1; Renmark Fruitgrowers' Co-op. Ltd., 2; Murrabit Packing Co. Pty. Ltd., 3.

The comprehensive District displays, as usual, attracted large crowds. These were highly creditable and showed the diversified interests in the several districts plus skill in organisation and display. The first prize was won by Wangaratta district, showing the work of their primary and secondary industries. The fruit shown was of excellent quality, citrus predominating: there were also very nice samples of dried and canned fruit.

The second price was won by Whittlesea district—with its wool, grasses, poultry and dairy products, fruit, etc., including choice Apples and Pears, as well as bottled fruits.

The Swan Hill District display reflected great credit on the organisers, and won a "very highly commended" certificate. Here again the multifarious activities were shown to advantage, the fruit section being of great interest. Some very choice citrus fruit is produced in this area. Dried fruits, bottled fruits and vegetables helped to make this display attractive.

TRADE EXHIBITS.

THE ORCHARDIST finds many matters of interest at the Royal Show, not only in the fruit section, but also in the displays and practical demonstrations given by the various manufacturers of orchard requisites.

A number of new and recent introductions were noted on the various exhibits, a short description of some of these is given below.

Mr. Daniel Harvey, the well-known implement-maker of Box Hill, Victoria, demonstrated a complete range of ploughs and cultivators, ranging from the single-furrow single horse-drawn plough to the 16-plate two-way tractor disc cultivator plough. New implements of interest were the tandem off-set disc cultivator, two-furrow disc plough, and a two and three furrow road plough, suitable for tactor work. Of special interest also was the two-horse orchard harness, which has many commendable features. Mr. Harvey also demonstrated the Harvey-Delaney fruit grader, which grades all fruits, and is made in five models.

Mr. F. R. Mellor, who was on the same stand, demonstrated the Cooper power sprayer, also various hand and bucket spray pumps, the Gay sprinkler, lidding presses and other lines.

The Vacuum Oil Company, amongst other things, demonstrated their Gargoyle spraying oil, showing the correct and incorrect method of emulsifying. A new power kerosene known as Austral Harvester Oil was also shown. After years of experiments this oil has been especially prepared suitable for all exposed bearings, the rays of the sun having no effect on it whatever. Orchardists should find it of particular value for tractors, implements and other machines which are exposed to the sun.

The Gerrard Wire-Tying Machines Co. Pty. Ltd. demonstrated the latest methods of fruit packing, and also showed their special 14-gauge high-tension wire, which is specially made for reinforcing sweat boxes, cannery lugs and packing boxes. For the cost of 2d. per box, the life of same can be considerably extended. Other lines shown were corrugated fasteners, tacking machines, lidding presses, etc.

Victor Leggo & Farmers Limited had on their stand a complete range of "Vallo" prepared sprays. Two new lines of interest were the N40 dust, which is put up in shaker top tins for use in the home garden; a new fumigator for green houses, and Vallo prepared white oil and ready mixed Bordeaux, put up in different colored packages according to strength.

The Lightning Fruit Grader Company demonstrated their complete range of fruit-grading implements. Approximately 20 different models were shown on the stand. In addition, demonstrations were given during the week at the firm's factory on citrus processing machinery.

H. V. McKay Pty. Ltd. showed the Sunvine Mouldboard Plough, Satellite Horse Hoes, Sunvine Spraying Plant, and many types and sizes of mouldboard, and disc ploughs, tyne cultivators, etc.

Nitrogen Fertilisers Pty. Ltd., who are the distributors of sulphate of ammonia and other nitrogenous fertilisers, had a most attractive stand, together with samples of their fertilisers. Much valuable information was supplied to enquirers on manuring questions. Attractive and interesting literature was also distributed. In conjunction with this company, Messrs. Henry H. York & Co. Ltd. showed various classes of manures handled by them, including: Nitro-Phoska, Cal Nitro, Nitrate of Lime, Urea, Floraphos and Floraphos Special.

Trewhella Bros. Pty. Ltd. demonstrated in an interesting manner their Monkey Grubbers and Tree Pullers. These machines are made in varying sizes to suit all classes of land clearing operations.

Ronaldson Bros. & Tippett Pty. Ltd. showed working models of their motor spray outfits.

Messrs. Welch, Perrin & Co. Pty. Ltd., also demonstrated pumps for bucket, barrel or vat. Lines of interest to the grower included: "The Mysto" knapsack spray pump, "Crescent" bucket spray, Myer's Cog Gear Spray Outfit, Myer's enclosed Duplex self-oiling power spray pump, the "Roseberry" complete power spray outfit, and the Myer's spray gun.

Messrs. Russell & Company also demonstrated their motor spray pumps and engines.

Other lines of interest to orchardists which were noted included spray and dusting materials from the various manufacturers, including "Blue Bell" arsenate lime sulphur, etc., Cooper fruit sprays, "Clensel," "Destruxol," "Elephant" brand arsenate of lead, white oil, lime sulphur, etc., Swift's arsenate of lead, "Volck," "Black Leaf 40," Neptune spraying oils.

The "Digger" stump tree puller was demonstrated by the Quick Manufacturing Company.

Law, Somner Pty. Ltd. had on their stand a new fodder known as "Tangier Pea," which is recommended either for fodder or as a green manure crop.

Codlin Grub Instinct Challenges Science.

(By J. F. Littooy, in "Better Fruit," U.S.A.)

THE instinct of that very tiny, microscopic codlin moth worm, has defied science to efficiently control it for half a century. Its remarkable instinct causes millions of dollars in losses yearly in damage to fruit by worm holes and stings, also added millions of dollars are used yearly to fortify the standard inefficient control practice (the use of arsenate of lead) by supplementing such with many auxiliary measures. Yet all the practices combined remain inefficient to give positive control of codlin moth in such districts where this worm thrives and is difficult to combat. All this points to one thing, a challenge to science.

Helpless, Yet Good Sports.

Regardless of such helpless situation, the fruit growers act like good sports. The fruit growers pass laws in some States to compel spraying as an aid to control codlin moth. They even pass laws to penalise themselves, so as to condemn their own worm-infested fruit. Also pass grade rules, they themselves establish, to bar out certain worm-marred fruit, so that the consuming public will get full value received.

When new problems are also heaped upon the fruit growers (as like the residue problem), again, like good sports, they yield gladly and wash off the spray residue to satisfy the consumer and the mandates of federal requirement.

Thus, some State laws compel the fruitgrower to put on the residue. The economic law compels him to use plenty of it, in the many seasonal sprays used, and the Federal law compels him to take it off.

The fruitgrower is surrounded by mandates of State, Federal and economic laws, yet he would not rescind any of them, as all contribute to his success.

Arsenate Sprays Only 50 Per Cent. Efficient.

A very unusual feature is that the law in some States also compels the fruitgrower to use a control practice for codlin moth that is only 50 per cent. efficient in badly infested districts. WHY?

Scientists, who for years have recommended such material (arsenate), have not yet explained how the worm gets its toxic dose that kills. WHY? When this is explained, we may then have a clue to secure more efficient control. WHEN?

Various kinds of poison have been used, but for the past thirty years arsenate of lead, although very inefficient, has been the approved standard. WHY?

Two types of spray coverage only have been used, the film and the spot type, yet neither has the advantage over the other in control. WHY? The film type, while distributing the arsenate uniformly, contains so small amount of arsenate in the thin film produced, that its control is no better than the old established inefficient arsenate spot type. WHY?

The spot type has very serious faults, since it contains too great extremes in arsenate deposit. A great excess of arsenate lying useless in the spots. WHY? Between the spots there is practically no lead for control. Why? To show the great inefficiency of the spot type, analysis discloses, it holds four times as much arsenate (because of the excess in spots), as compared to the film, yet the film gives equal control. WHY?

Research entomologists show, when comparing the two types of spray used, that the film type of arsenate spray (as the amount of arsenate is increased) is the more efficient. WHY? They also show, that if the film could be built up to retain sufficient arsenate with the standard amount used, it should give almost perfect control of codlin moth. WHY?

Why Damage Apples to Control?

With the two great extremes of arsenate deposit in the spot type of spray it is not surprising that some entomologists give arsenate of lead a control rating of only 50 per cent. efficiency. WHY? One research entomologist also finds that the spot type of spray has other serious faults. He finds that about 60 per cent. of the worms that enter the Apple, enter at the rough margin of the arsenate spray spots which he suggests may act as a mechanical convenience for the very tiny worms so brace themselves while biting through the waxy, smooth and tough indigestible skin of the Apple. He recommends the spot type of spray. WHY?

The above explanation shows that the arsenate in the spray spot acts as a very great but costly convenience for the worms to damage the Apple before the arsenate controls the worms. They damage it two ways, resulting in serious loss, because of the culls produced both by worm holes and stings. Thus the spot type of spray, instead of acting solely as a poison to quickly kill the worms before they damage the Apple, forms a dual role, the one to control, the other to encourage a greater per cent. of damage to the fruit in the act of control. If entomologists rate spray efficiency on the per cent. of worms killed, instead of the per cent. of Apples protected from damage (the real object of killing the worm), how is this inconsistency explained? HOW?

This inconsistency troubles entomologists, and it is all brought about because of the remarkable instinct of that tiny worm that defies science. Will science conquer?

How is the Worm Killed?

The habit of this microscopic worm, whose instinct defies science in this intense scientific age, is interesting.

Why are the trees sprayed with arsenate when the codlin moth worm does not feed on the exterior of the leaf or the fruit like ordinary plant chewing insects, which are quickly killed by an arsenate spray. WHY?

As the codlin moth worm eats only beneath the skin and on the soft pulp of the fruit, such instinct places this insect in a class by itself (practically speaking) in its habit of seeking its food supply. If the codlin moth worm only feeds on the pulp of the Apple, then the important question that presents itself is, how does the codlin moth worm get its toxic dose that kills, especially when it does not feed on the poison spray surface of the leaf or fruit? HOW? Also why has arsenate or similar poisons, been used as the official recommendation by scientists for the control of this insect for half a century when it has not been definitely and scientifically established how the worm gets its poison by such a spray. WHY? Perhaps its use has been continued because, somehow, and in some unexplainable way, it just helps to control. Also because there is no known practical and cheap single substitute for arsenate, regardless of its past inefficiency to control. WHY?

Like other scientists, research entomologists encounter very vexing problems while endeavoring to control economic insect pests.

Some research entomologists believe that, when the codlin moth larvae get a toxic dose of arsenic, in all probability they get it only by accident. HOW? If the worm is killed only by accident, then a better spray practice that will increase the efficiency of the arsenate spray coverage so that most, if not all of the worms will be killed by accident is no doubt the type of arsenate spray coverage greatly desired by entomologists.

Accident—Not Science—Controls.

While it has not been established by entomologists how the worm gets its lethal dose (by accident or otherwise) while entering the Apple, the writer two years ago, presented the following yet unproven theory of how the accident may happen. The explanation appears plausible to scientists.

Research entomologists have established that this microscopic worm, soon after it has hatched, peels the smooth, tough, indigestible skin of the Apple before entering to eat the soft pulp. The method of peeling the Apple is for the worm to bite off microscopic bits of skin by its mandibles until the entrance of the hole is large enough to fit its body. The many, very tiny bits of skin bitten off are piled by the worm around the entrance of the hole (seen only through a microscope). The minute diameter of the hole is compared to a hole made by the very point (only) of a pin through a piece of writing paper.

While peeling the Apple the worm also puts to one side, not only the tiny chips of skin, but the particles of loose lead (insoluble matter) adhering to the waxy skin. With the poisoned skin peeled off, the worm is now enabled to feed on the soft **poison-free** pulp of the Apple, the source of its food supply. But just how does the worm get this accidental and fatal dose? HOW?

Acid Liberates Lethal Arsenic Dose.

The worm, while peeling the Apple, places the slightly **Acid Moist**, tiny particles of skin around the entrance of the hole. This acid immediately contacts with the minute particles of the arsenate of lead (providing some of it is there).

The **Moist Malic Acid** which is liberated while the worm is crushing the Apple pulp with its mandibles while peeling the Apple, adheres to the skin particles and this acid, where it contacts with the arsenate which is attached to such skin particles, renders some of the arsenate soluble. Also, if any of the minute particles of arsenate adhering to the minute particles of waxy skin to which the arsenate clings, or even loose lead particles surrounding the hole are accidently brought back into the entrance of the hole (hence on to the acid moist pulp of the Apple) by the many movements of the worm while peeling, then the moist malic acid of the freshly-chewed pulp instantly attacks the arsenic and causes it to become immediately soluble. Thus the food supply is instantly poisoned and the worm gets its toxic dose quickly.

If the Apple is peeled by the worm at a place where there is little or no poison, like between the spots produced by the spot type of spray, then there is little or no chance for the worm to be killed by accident while peeling the Apple. This may help to explain why arsenic has been only 50 per cent. efficient. However, if there is a good, heavy, uniform, smooth coverage of arsenate on the skin at the point where the worm peels the Apple to enter, then the chances are very greatly increased for the minute worm to be killed quickly by accident, and often before the worm has completed its task of peeling and damaging the Apple while entering. If the worm is killed quickly while peeling the Apple it results in little damage and leaves only a microscopic or invisible mar or sting—hence no visible damage to lower the grade from a high priced Apple to a cheaper one.

Worm Tunnels Through Arsenate.

ANOTHER SERIOUS FAULT discovered by one research entomologist, regarding the spot type of spray, is that the worm can tunnel right through the thick spot of arsenate and enter the Apple without being killed. Perhaps this may be interpreted by entomologists to indicate that the worms have probably become immune to arsenate, or that the arsenate lacks toxic quality, or both. It is doubtful if such could be the proper interpretation when considering that the worm in peeling the Apple, deliberately removes the grains of poison before seeking its food supply, the interior, not the exterior part of the Apple.

In this connection, the writer ventures with another, yet unproved, theory of how the worm may enter the Apple through a thick spot of arsenate produced by the spot type of spray and yet not get a lethal dose.

The habit of the worm, in making surface entry into the Apple, is not to eat, but to push any movable particle on the surface to one side by its head or lay them aside by its mandibles.

When the worm enters through a thick spot of arsenate spray on the Apple it is entering where the lead particles have been tightly packed together as a result of their settling in water after spraying and to the bottom of the spray drop, which if large, takes an hour for the drop to dry. The lead particles settle quickly and pack tightly, and when dry it results in a firmly packed incrustation or arsenate spot.

The exceptional worm may tunnel through such a spot by pushing arsenate particles to one side, by the side-swaying movement of its head; its body also fits snugly against its tunnel wall of arsenate. The same movement of its head against the smooth skin, when reached, may also clear away the arsenate on the skin at the point of entrance. Like at the margin of a spray spot or between two Apples, the tunnel wall also affords the worm a chance to brace itself so as to easily peel the Apple. Then, when the worm peels away, the very tiny, waxy particles of skin, as it makes its entrance, they are placed to one side and held tightly against the lead particles of the tunnel wall by cohesion of the moist, also waxy particles of skin to the minute and tightly packed particles of lead. The side movement of the head of the worm, while placing the skin particles to one side, packs these particles tighter, and in doing so, there is little or no chance for the loose lead particles to fall in on the acid pulp of the Apple to render the arsenate soluble so as to accidentally poison the food supply, especially if no rain prevails.

If the worm should drag arsenate particles into the hole behind its body, as it enters, the food supply would not be poisoned because its body plugs the entrance, and the worm is feeding far beyond, a point where the poison cannot reach. Also, the pulp dries quickly near the entrance of the hole, and it is only the moist, freshly chewed acid pulp that could render the arsenate soluble. From this theoretical analysis of the situation, herein submitted, if correct, it is evident that an arsenate coverage that will leave a complete, smooth, heavy coating of arsenate (instead of spot incrustations) is the type of coverage that will prevent the worm from using the arsenate spray deposit as a mechanical convenience to damage the Apple. Also because most of the worms will get their toxic dose quickly by accident.

What Entomologists Should Establish.

It has never been established by entomologists as to the MINIMUM and FEASIBLE amount of arsenate required to control the worm on a given small unit of the Apple, and such unit to represent the arsenate distributed uniformly over the Apple as an efficient spray coverage, in order to effect positive, instead of only partial control of the worm. Past spray practice has never accomplished this because certain parts of the Apple always contained too small an amount of arsenate or none at all, varying greatly with the type of spray coverage used.

The minimum amount of arsenate of lead per unit area required in an efficient spray coverage should be established by entomologists by analysis. Also if such an analysis is made, to ascertain the arsenate spray, efficiency, the writer has established that it must be made on that part of the Apple containing the least arsenate, because the efficiency of the spray coverage must be determined at its weakest link. In a film coverage this must be made on the shoulder of the Apple immediately below the top and above the equator line. Analysing the whole of the Apple to compute analysis would be erroneous. Analysing an excess at any point would also be erroneous. The spot type of spray for comparison would contain too much arsenate, and the excess in the spot is just as useless for control as between the spots containing no arsenate; but if such useless excess in the spots were ditributed uniformly in the area between the spots it should give efficient control.

An Efficient Arsenate Coverage.

Every minute part of the Apple should be covered with arsenate particles, tightly compact against each other and clinging to the surface of the Apple to make an efficient spray coverage, the microscopic particles to cling like microscopic particles comprising the natural bloom powder on fruits, which is a perfect uniform cover which neither the rain nor wind removes, but on a touch is easily removed.

The minimum amount of arsenate of lead to give (practically speaking) positive control of the codlin moth, with the coverage mentioned, should be about 100 micromilligrams per square inch (at the point where the least lead occurs on the Apple). This amount according to the writer's determinations, under field conditions, is required per unit of inch-area to control in those sections where the worms are difficult to combat. Also, when such control obtains it greatly minimises the theory of worm immunity to arsenate. The use of proper accessory materials combined with arsenate of lead, has finally accomplished an efficient type of coverage which makes it now possible for fruit growers to get (practically speaking) positive control of codlin moth larvae, if they do their part and use an ample amount of the spray solution and great care in doing a very thorough job of spraying. Where a large Apple tree would require about 25 gallons of spray, then, if only ten gallons are applied, it would be, for the most part, wasted, and the use of 50 gallons would be greater economy.

Residue no Problem.

The residue produced by this type of coverage is like that of the natural bloom powder coverage on fruits which is very easy to remove. It removes readily to a point far below the world tolerance requirement regardless of the number of sprays used. As an experiment last year to determine the ease of residue removal with this type of spray, one fruit grower used 16 cover sprays on 12 of his trees (under arid conditions) and the residue test per pound of Apples showed, after washing, .004 or 60 per cent. below the export tolerance requirement. His seasonal control load analysed 115 micromilligrams of arsenate per square inch area. He also accomplished surprising control under very bad conditions for worm infestation. No worse condition could obtain or does obtain, anywhere. Many of the fruit growers were just as successful under like conditions where the fixator spray was used.

This type of spray coverage causes the microscopic particles of lead to cling closely together and fix themselves to the sprayed surface, not to be stuck on like stickers where certain types of unrefined gummy oils are used which seriously interfere with the residue removal, even if treated by the heated, acid bath.

BOUNTIES ON EXPORT.

Tasmania's Small Share.

Crippling Effect of Sugar Agreement.

THE SERIOUS EFFECT of bounties on export was stressed at the Annual Conference of Tasmanian Fruitgrowers at their recent Conference in Hobart.

The Chairman (Mr. B. J. Pearsall, M.H.A.), said that the sugar industry, by reason of the sugar agreement, was an enormous drain on the Commonwealth, and the contribution of Tasmania was over £1,000 a day. It was crippling the fruitgrowing industry, in addition to being costly to the State. That was the hard part of it.

During the last five years £4,973,543 had been given in the form of bounties by the Commonwealth, but Tasmania had received very little in the way of concessions under the Bounty Act. Towards cattle export £265,556 had been paid, and other figures were—Shale oil, £19,867 (of which Tasmania received £1,132); iron and steel, £1,473,005; sulphur, £238,792 (Tasmania, £22,940); canned fruit, £133,920 (Tasmania, £7,884); wine export, £1,247,230; and cotton and cotton yarn, £241,856. In addition, assistance had been given under the Export Guarantee Act to—Canned fruit industry, £77,610 (Tasmania receiving £1,338); hop industry, £24,572 (all to Tasmania); dried fruits industry, £218,775 (Tasmania getting nothing).

Assistance similarly was rendered by the Commonwealth to brown millet, citrus fruit, herd testing, fruit pools, prospecting for precious stones, oil, and the eradication of cattle tick in West Australia.

Out of the £5,000,000 or thereabouts expended Tasmania had only received £60,960 in the five years. Now flaxgrowers were to receive £20,000 a year for five years, £100,000 in all, and if the small fruit industry in Tasmania could get a similar amount, it would be a help indeed. Mr. Gunn, on behalf of the Federal Government, had visited Tasmania to inquire into the hop and small fruit industries, and it had been his intention to further investigate the small fruit question, but he had now stated that he was arranging for two departmental officers to visit the State within a few weeks.

Small fruitgrowers could organise into a very solid body, and their fruit could be marketed under an organised scheme. They now were receiving less for their fruit than before the war, and if that state of affairs continued, the industry must go out of existence. The sugar agreement question was to be reviewed, and it was for Tasmanian growers to make strong representation to the Commonwealth with a view to securing relief from the terrible burden imposed by the bolstering up of an industry at the cost of crippling primary industries in Tasmania.

Preferential Trade Within The Empire.

Imperial Economic Conference is Now Sitting in London.

England Imports £500,000,000 Worth of Goods Annually, of Which £301,000,000 Are From Foreign Countries and Only £199,000,000 From Within the Empire.

Empire Preferential trade would wonderfully Assist Australia and New Zealand.

Important Address by Senator R. D. Elliott Before the Victorian Fruit Marketing Association.

IMPERIAL PREFERENCE is a subject which now looms large in Empire economics.

The Prime Minister (Mr. Scullin) and the Minister for Markets (Mr. Parker Moloney) are attending the Imperial Economic Conference in London. The various sections of Australian producers have put forth their ideas for British preference.

The recent Australian Conference of Fruitgrowers held at Hobart asked for a Preference of 5/- cwt. on Apples.

The Empire Producers' Association in England has expressed itself in favor of a preferential tariff of 2/- per dozen tins on Empire produced canned fruit.

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The subject of British preference for Australasian products was dealt with in an appreciated address by Senator R. D. Elliott before the annual meeting of the Victorian Fruit Marketing Association on September 26.

Senator Elliott said:—

The outstanding impression of my visit to the Old Country was the very great interest being taken in the movement for reciprocal preferential trade and the development of the economic resources of the Empire for the benefit of the peoples of the Empire. Lord Beaverbrook is devoting himself to the campaign known as the Empire Crusade, whose direct objective is to develop England, Australia and other sections of the British family by fiscal reform in England, including tax on foreign food and free admission of Dominion products.

Those who have investigated the matter tell me this will not involve increased cost of living to Britain.

When Chamberlain proposed this scheme the Dominions could not produce enough food for England—now not only can they produce sufficient, but they can provide a surplus. Lord Beaverbrook is bringing home to us all a realisation of the tremendous economic opportunities within our reach—opportunities fully appreciated by foreign countries, but for the time being a little out of focus to those most concerned—the citizens of the various sections of the Empire. Thanks, however, to the activities of these people the perspective is improving. I found that wherever you went in England or Scotland, be it amongst financial people, artists, business of working men and women, within a very few moments of contact conversation would turn to this question of Empire trade and development. I was present at meetings with audiences running up to eight thousand, and it was interesting to see that these people would gather because of their hunger for information on this, now regarded as a very great subject.

The policy does not embody the abolition of Dominion tariffs, but it does provide for protection of the British markets to the British industrialists and workmen and reciprocal arrangements to ensure the development of those industries most natural to each country.

There are, of course, many difficulties in connection with this movement. Difficulties are there to be overcome. The general impression in England was that the Dominions, and particularly Australia, were not interested in Empire reciprocity and would have nothing to do with it. It almost looks as though this impression had been broadcast in England by enemies of the Empire. France, Germany and foreign countries view the movement with apprehension. They realise that to them England with her forty-five million people is a free and unrestricted market for their goods, therefore an asset of great value. This can be readily seen when you look at trade figures for last year:—

Country.	Exported to United Kingdom.	Purchased from United Kingdom.	Debit balance against U.K.
U.S.A.	£196,000,000	£46,000,000	£153,000,000
Denmark	56,000,000	10,000,000	46,000,000
Argentine.. ..	81,000,000	29,000,000	52,000,000
Netherlands ..	42,000,000	21,000,000	21,000,000
France	56,000,000	31,000,000	25,000,000
Germany	68,000,000	37,000,000	31,000,000
Russia	26,000,000	4,000,000	22,000,000

These exports representing the surplus production of these countries, and mostly goods that could and should be produced within the Empire, and in many cases being dumped, make it increasingly difficult for English manufacturers to establish on a basis of mass production and almost impossible for the Dominions to compete with their primary products in England—their only open and natural market.

To mention just one or two items—meat and wheat. 90 per cent. of the beef that entered the U.K. came from the Argentine Republic. This business is controlled by five foreign firms, one of which has 5,000 butcher shops in England. Between these five they make a profit on this trade of 7 million pounds per annum, and none of them pay direct income tax to the U.K. Lord Beaverbrook holds that given the security of the market Australia could respond and could work up to a position whereby she would have a fair proportion of this great trade.

Wheat.—If we produce we must distribute. Mass production is no use unless we have mass consumption to consume what is produced. The Australian wheat producer is handicapped in that the U.S. Federal Farm Board, with its hundred millions of pounds of Government capital, can go into the Chicago market and purchase 20, 30 to 40 million pounds' worth of wheat and sell it if possible within the borders of the United States and her colonies, if not dump it into the only market open to them—that of England.

The development of reciprocal trade and a duty on foreign foodstuffs with free admission of Dominion products into England, which is the policy the Crusaders are working for, would enable Australia to compete in that great English market at a price fairer and more remunerative to the grower than exists at present. Fairer

because she would then be competing against cost of production in other countries instead of the dump surplus of the U.S. and the subsidised surplus of Germany and France.

To give some general idea of the tremendous market existing in England, we find that she imported last year 29 million pounds' worth of wheat and flour from foreign countries, the Empire providing 34 millions.

Meat.—She imported 34 millions from foreign countries.

Butter, Cheese and Eggs.—She imported 45 millions from foreign countries. **Wines.**—Five millions. **Fruit.**—Twenty-five millions.

Our difficulties are the inevitable consequence of the fool's paradise in which we have been living. **Geographically isolated we have been trying to develop economic laws without regard to the rest of the world.** There should not be unemployment and hunger in a country so well endowed with natural resources—but as sure as day follows night, we will return to sanity and prosperity the better for the gruelling we are now experiencing.

Let us weave the strands of knowledge, experience and British character into the web of Empire progress and prosperity. This issue is a great and vital one and too big altogether to be a party question. It is for all of us to do our utmost to let the people know that Australia is ready and anxious for reciprocal trade arrangements and I would suggest that organisations and individuals write or cable to Lord Beaverbrook accordingly. Letters addressed Lord Beaverbrook, London, are sufficient.

On the motion of Mr. Fred. Thomas, M.A., a cordial vote of thanks was accorded to Senator R. D. Elliott for his address. It was also decided to send cables to Mr. Scullin and Lord Beaverbrook in support of the policy of Empire preference.

The Apple Industry.

Eliminating Inferior Varieties: Reducing Costs of Production: Advertising to Increase Consumption.

(By a Correspondent.)

(It is interesting to know what subjects are exercising the minds of growers. One reader who has an orchard on the Mornington Peninsula, Victoria, has penned the following article, at the same time stating, in a covering note, that the article in the August "Fruit World," entitled "Apple Adevertising a Necessity," needs "rubbing in." Comments from other growers on this or any other topic, will be welcomed.—Ed. "F.W.")

APPLE GROWERS are beginning to wonder how the coming season is going to turn out—in the first place what the prospects are for a good show of blossom, which, given favorable conditions, will result in a good setting of fruit, and then what the prospects are with regard to a payable price being realised for at any rate the major portion of the crop.

Growers are sometimes found to be wondering whether prices will be good because of there only being a moderate or light crop of fruit available for picking, but that is not a really satisfactory solution of the problem, as for certain growers to prosper through a high price for a short supply of fruit, some other growers must have necessarily suffered a partial or total loss of their crop.

In addition, high priced fruit must tend to fewer people being able to buy the fruit, and probably to some extent the taste for fruit being lost.

In the present economic position no doubt there will be difficulties to be faced by everyone, but as regards the general development of the Apple market, the objects to be aimed at would seem to be:—

(1) **Elimination of Inferior Fruit** in the Melbourne market as it depresses the sale of all the fruit, and the production of good crops of clean, good-sized and attractive fruit.

(2) **Reduction of Costs of Production;** mutual interchange of ideas as to improved methods of cultivation, spraying, etc., might be of help here, also any aid that science can give us.

The Aphelinus mali has undoubtedly been a great help to the growers in keeping down woolly aphis. If some similar type of parasite be discovered and introduced which will attack the codlin grub, another great aid towards reducing spraying costs will have been found.

(3 **The other way of development would be by the increasing of the consumption of fruit.**

It has been stated that in America twice as many Apples per head are eaten as is the case in Australia, and a corresponding increase can only be achieved through education.

At the present time the general public is taking more interest in questions of diet and references to vitamins, etc., are fairly frequently seen in the daily papers.

Many fruitgrowers would probably be doubtful as to subscribing any money for the purpose of having articles or advertisements published in the daily and weekly papers as to the benefits to health where fresh fruit is eaten daily, but there is no doubt that the public are largely influenced by what is seen "in print," and if scientific statements were so published at frequent intervals, the public would eventually begin to take notice and act accordingly.

It is well known that advertising has been the foundation of the success of many patent medicines, and in this instance it is not merely a case of helping the producer to dispose of his goods, but also of really benefiting the purchaser, scientific opinion being more than ever emphatic as to the great value from the point of view of health in eating fresh fruit.

Spraying for Black Spot.

AN INTERESTED READER on the Mornington Peninsula, Vic., sends along the following hints:—Owing to broken and unseasonable weather, it is sometimes difficult to get the whole of an orchard sprayed at the correct time.

Owing, however, to the fortunate circumstance that the best times for using Bordeaux spray and lime sulphur spray are in the one case just as the buds are beginning to open, and in the other when the blossom is full out, by spraying say half of the orchard with Bordeaux, and the remaining half say a week or ten days later with lime sulphur, the period over which the spraying may be done is considerably extended.

In some quarters it is recommended that the trees should not be sprayed with the same remedy for blackspot, and by starting by spraying with Bordeaux the patch sprayed the previous year with lime sulphur, this result may be secured.

Peaches, Pears and Plums in Cold Storage.

The Effect of Varying Temperatures.

(By G. B. Tindale, B.Ag.Sc., Cool Storage Research Officer, Department of Agriculture, Victoria.)

THE EFFECT OF TEMPERATURE on the storage of various fruits is a matter of great importance to people concerned with the cool storage of fruit. In order that the effect of temperature may be accurately studied, twelve experimental chambers were specially constructed last year at the Government Cool Stores. The temperature of these chambers can be automatically controlled at any degree of temperature.

In February last Peaches, Pears and Plums were secured from the Doncaster district, and were promptly stored at various temperatures.

The following tables and summaries explain the results obtained:—

Table 1.

The behavior of Smith's Peach after four weeks' storage at the various temperatures are given hereunder, showing (a) condition on removal, (b) condition after ripening at room temperature of 60 degrees to 70 degrees.

Storage temperature 31 deg. Fahr.—(a) Skin green, flesh normal; (b) ripened perfectly. Full development of flavor, aroma, and lusciousness.

34 deg. Fahr.—(a) Skin green-yellow, flesh normal; (b) ripened normally, but falling off in flavor and lusciousness.

37 deg. Fahr.—(a) Skin yellow, flesh white, but slightly mealy; (b) did not ripen normally. Flesh became mealy without flavor or lusciousness.

40 deg. Fahr.—(a) Skin yellow, flesh mealy; (b) area around stone went brown. Flesh collapsed. Skin developed numerous small cracks. With slightest pressure skin rubbed off.

43 deg. Fahr.—(a) Skin yellow. Flesh collapsed, going brown around the stone. Too soft to handle. At 46 deg. the same conditions were noted as at 43 deg.

Table 2.

The behavior of Smith's Peach after further storage at the following temperatures is shown hereunder—(a) condition on removal; (b) condition after ripening at room temperatures of 60—70 deg.

31 deg. (five weeks).—(a) Skin green, flesh normal; (b) ripened normally with full development of lusciousness and flavor.

31 deg. (six weeks).—(a) Skin green, flesh normal; (b) ripened normally, except that flavor was definitely declining.

31 deg. (seven weeks).—(a) Skin fairly green, flesh normal; (b) appeared to ripen normally. Fair degree of lusciousness, but flavor very poor.

34 deg. (five weeks).—(a) Skin yellow, flesh normal; (b) flesh became slightly mealy. Very little flavor.

34 deg. (six weeks).—(a) Skin yellow, flesh normal; (b) same conditions as 34 degrees five weeks.

34 deg. (seven weeks).—(a) Skin yellow, flesh mealy; (b) flesh quite mealy. No flavor.

37 deg. (five weeks).—(a) Skin yellow, flesh mealy; (b) flesh collapsed. No flavor.

37 deg. (six weeks).—(a) Skin yellow, flesh mealy; (b) flesh collapsed, area around stone brown. Skin developed numerous small cracks.

Summary Peach Storage Experiment.

The experiment shows that the Peach (Smith's) goes through a very definite cycle of changes during storage, the rate at which it passes through the cycle depending on temperature of storage, a small decrease in temperature showing up the changes considerably. Up to a certain stage depending on the length of storage and storage temperature the Peach will, on removal to room temperatures, ripen normally, developing flavor, aroma, and lusciousness to a full extent. When stored beyond this point, the Peach will no longer ripen normally on removal to room temperatures. The flesh will gradually become mealy and at the same time flavor, aroma, and lusciousness will gradually cease to develop. On further storage the flesh of the Peach will actually collapse in store, the collapse commencing around the stone, this area going brown. At the same time, the skin will develop numerous small cracks, and will come away from the flesh with the slightest pressure.

In the experiment the maximum life was five weeks when stored at the lowest temperature of 31 deg. This allows for normal ripening after removal from store.

Table 3.

The behavior of Williams Pears after six weeks' storage at various temperatures shown hereunder (a) condition on removal; (b) condition after ripening at room temperatures of 60—70 deg.

1. 31 deg. continuously—(a) skin green, flesh normal; (b) ripened normally. Full development of flavor and lusciousness.

2. Storage delayed for 2 weeks at 40 deg., then 4 weeks at 31 deg—(a) skin dingy green, flesh normal; (b) appeared to ripen normally. Flesh, however, mealy with collapsed area around core. No flavor.

3. 34 deg. continuously—(a) skin green, flesh normal; (b) same conditions noted as for No. 1.

4. Storage delayed for 2 weeks at 40 deg., then 4 weeks at 34 deg.—(a) skin green-yellow, flesh normal; (b) same conditions noted as for No. 2.

5. 37 deg. continuously—(a) skin dingy green, flesh normal; (b) appeared to ripen normally. Fair degree of flavor and lusciousness.

6. Storage delayed for 2 weeks at 40 deg., then 4 weeks at 37 deg.—(a) skin green-yellow, flesh normal; (b) same condition noted as for No. 2.

7. 40 deg. continuously—(a) skin yellow, flesh mealy; (b) flesh collapsed, particularly around the core, this area being dark grey. No flavor.

8. 43 deg. continuously—(a) skin bright yellow, some scalded, flesh mealy and grey in color; (b) scalded areas spread until whole surface was affected. Apparently sound Pears all scalded. Flesh collapsed.

9. 46 deg. continuously—(a) skin bright yellow, many scalded, flesh mealy and grey in color; (b) same conditions noted as for No. 8.

Table 4.

The behavior of Williams Pears after eight weeks' storage at various temperatures is given hereunder, showing (a) condition on removal; (b) condition after ripening at room temperatures of 60—70 deg.

1. 31 deg. continuously—(a) skin green, flesh normal; (b) ripened normally. Full development of flavor and lusciousness.

Summary Pear Storage Experiment.

The picking, storing, and ripening of Williams Pear offers a very interesting study, as this fruit requires special treatment for best results. It will not develop full quality if left to ripen on the tree. It must be picked while hard green, although fully grown, and allowed to ripen off the tree, when it will gradually change in color from green to a deep yellow, at the same time the flesh will become soft and luscious with a full development of flavor and aroma. This

ripening may be arrested

by storing the Pears at low temperatures. By storing at a temperature of 31 deg., or even slightly lower, the Pears can be kept green for eight weeks and on removal to room temperatures of 60 deg. to 70 deg., the Pears will ripen normally. Should the Pears begin to change color during storage, the amount of change being proportional to the temperature of storage and the length of storage, then on subsequent removal to room temperatures, it will be found that the Pears will not ripen normally. Should the change in color be only slight, the Pears will subsequently ripen normally except for a distinct mealiness of flesh.

Also the flavor will be poor. Should the Pears have become green-yellow in storage, then on subsequent ripening at room temperatures, the Pears will gradually turn bright yellow, but the flesh will show definite signs of collapse, this being particularly noticeable around the core, this area going dark grey in color. There will be also an entire lack of flavor.

Should the Pears actually turn yellow during storage, then on removal to room temperatures, besides flesh collapse and entire absence of flavor, the Pears will scald if indeed they had not already commenced to do so prior to removal from store.

Table 5.

The behavior of Grand Duke Plums after 8 weeks' storage at various temperatures will be noted as follows. The storage temperatures are given, also the condition on removal to room temperatures:—

Storage temperature 31 deg.—Ripened normally; flavor good.
34 deg.—Flesh normal; poor flavor.
37 deg.—Flesh soft; no flavor.
40 deg.—Flesh softer; no flavor.
43 deg.—Flesh very soft; no flavor.
46 deg.—Flesh very soft; no flavor; skin split.

Summary Plum Storage Experiment.

As with the Peaches and Pears, the Plum passes through a very definite cycle of changes. Up to a certain point depending on storage temperature and length of storage, the Plums will ripen normally when removed to room temperatures. If stored beyond this stage, the flesh will gradually become soft, while the flavor will gradually disappear. On further storage the flesh will become very soft, there will be no flavor, and the skins will split open.

As in the case of the Peach and the Plum, of the temperatures tried, 31 deg. was the best, and the maximum life at this temperature was approximately eight weeks.

2. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 31 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

3. 34 deg. continuously—(a) skin dingy green, flesh normal; (b) appeared to ripen normally. Slight falling off, however, in flavor and lusciousness.

4. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 34 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

5. 37 deg. continuously—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

6. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 37 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

7. 40 deg. continuously—(a) skin bright yellow, many scalded, flesh mealy; (b) all scalded. Flesh collapsed.

8. 43 deg. continuously—(a) skin all scalded, flesh collapsed.

9. 46 deg. continuously—same conditions noted as in No. 8.

ADVERTISING AUSTRALIA'S PRODUCTS IN ENGLAND.

"Help Australia and help yourself," is the message of the set of posters now being displayed on the Empire Marketing Board's special poster frames throughout the United Kingdom, appealing to British housewives to ask for Australian canned and dried fruits and help the growth of Empire trade.

The set consists of five posters. The large poster in the centre is a practical reminder of what to ask for in the grocer's shop. It shows packets of raisins, currants and sultanas and tins of Pears, Peaches and Apricots clearly marked "Australian brands." Other posters in the series give attractive pictures of gathering Apricots for canning and irrigating currant vines, and show recent record figures of imports of Australian canned and dried fruits into the United Kingdom. This poster set has appeared on the Board's frames in London and nearly 500 cities and towns in England, Scotland, Wales and Northern Ireland.

Australian canned and dried fruits are also being specially advertised in a series of leaflets telling the story of the two industries and giving a number of simple and practical recipes. These Empire Marketing Board recipe leaflets are proving very popular with housewives. Nearly 300,000 have already been issued.

CONTROL OF BLACK SPOT OF APPLE AND PEAR.

Methods in N.S.W.

In view of the possibility of the wet conditions experienced in the western tableland district of N.S.W. throughout the last three months continuing into the spring and early summer, writes the local Departmental Fruit Instructor, early application of the sprays necessary for control of black spot of Apple and Pear is important.

Growers may again be reminded that in spraying experiments carried out for five consecutive seasons at Batlow the following treatment gave 98.49 per cent. of clean fruit as compared with only 39.02 per cent. on unsprayed trees:—

Bordeaux mixture (6-4-40) at spur-burst stage.
Lime-sulphur (1-14, 26 deg. B.) at pink stage.
Lime-sulphur (1-35, 26 deg. B.) at calyx stage.

This programme is strongly recommended by the N.S.W. Department of Agriculture for control of black spot in districts liable to infection.

Our happiness in this world depends on the affections we are enabled to inspire.

* * *

Fix'd to no spot is happiness sincere;
'Tis nowhere to be found, or ev'rywhere;
'Tis never to be bought, but always free.—Pope

More and Better Apples.

WHILE in other branches of fruitgrowing, nitrogen fertilisers are now accepted as essential for the most profitable production, especially in areas devoted to citrus and canning fruits, there has not been the same increased use of these fertilisers in the Apple-growing areas.

With the rapid decline in the price of sulphate of ammonia during the last couple of seasons, however, the striking results of using this fertiliser, and the testimonies of the horticultural press and leading authorities, there is every reason why the Apple-grower should test for himself the results of a timely application of sulphate of ammonia. The quantity to be applied depends on the variety of Apple, the soil conditions, and on climate and rainfall; but it is safe to say that one or two cwts. per acre per annum are the quantities which should be used under general conditions.

Mr. H. N. Wicks, of Balhannah, S.A., prominent orchardist and nurseryman, and a member of the South Australian Advisory Council of Agriculture, said that his orchard, which in 1928 yielded approximately 15,000 cases of fruit, in 1929 yielded only about 3,000; but the noticeable feature was that practically all the fruit which he harvested in 1929 was produced on trees which were treated in 1928 with sulphate of ammonia. The indications were that, although applied when the trees were carrying a phenomenal crop of fruit, they were so stimulated by the sulphate of ammonia that they were able to form sufficient buds to produce a semblance of crop for the 1929 season.

Arising from his experience as a nurseryman, Mr. Wicks reports that while a spring dressing of sulphate of ammonia is essential, autumn dressings are also necessary. Mr. Wicks' statement on the subject is as follows:—

"That the application of nitrogenous fertilisers to practically all fruiting trees is not only desirable, but almost a necessity, is a fact now recognised by the majority of successful orchardists. In giving the experiences outlined below, I would point out that all the results obtained were secured with sulphate of ammonia. This was used exclusively because previous tests had proved it to be more efficient than other nitrogenous manures.

"Most orchardists adhere to the usual contention that the best time to apply this essential manure is in the early spring to get best results. While I admit that a spring dressing is very advisable, I maintain that to confine one's operations to this alone is quite wrong. This contention is not based upon any wild supposition, but upon actual facts brought under my notice while handling many hundreds of thousands of fruit trees in all stages, from seedlings up to trees carrying heavy crops of fruit. My remarks are confined to deciduous trees only, as my experiments have not as yet been carried into the evergreen field of fruiting trees.

"The first indication that our methods were perhaps a little at sea with regard to stimulating growth on fruiting trees was brought about by observations made in the nursery in the following manner. A lot of planting takes place in the nursery during April and May in normal seasons, and extremely heavy applications of composite manures are used at the time of planting to ensure sufficient food for the trees to be pushed for at least three years without further applications of fertiliser. On one occasion sulphate of ammonia was applied to a bed of young Apples during mid-May. Having occasion to lift a few of these trees in mid-June, I was surprised to find that, although the outward appearances pointed to the fact that the trees were quite dormant, the root system was indeed very active, having made quite a mat of young rootlets. By the middle of July I measured some of these fresh young white tender root growths, and found it not at all difficult to get plenty over seven inches in length. Upon closer examination I found that undoubtedly the top bud system, although apparently dormant, had quite a distinct look, brought about by the larger buds which the trees were carrying. My contention is that if the roots are working briskly the natural and inevitable consequence is that the buds must be getting the benefit of this feeding. Since this I have quite definitely proved that trees, which have just been stripped of a heavy crop of Apples, can be stimulated into active root development in late May and early June by the application of sulphate of ammonia during mid-May. Just how this will affect the fruit bud development for the coming season has yet to be proved, but I have little doubt but that applications of the right manure at this season will, more or less, control the crops for the ensuing season.

"The facts outlined above relate almost exclusively to Apples, and looking at the greatest problem the Apple-grower has to face here in S.A., viz., the almost total failure of a large proportion of his Apple crop every alternate season, it seems to point to the fact that the trees become exhausted by their effort to produce a bumper crop, and it apparently takes two years for them to recuperate their buds sufficiently to repeat the performance. Feed the tree with the right foods which can be quickly assimilated, and I would not like to say that a great deal of the 'off-season business' will not vanish.

"The question will naturally arise: Why has this only just been brought to light? The answer is very simple, and can take the form of another question: How many orchardists ever trouble to see what their trees are doing UNDERGROUND during the winter months? and even so, unless stimulated in some way, the trees would probably prove to be just as dormant under ground as the tops. The nursery work which makes it essential to study the root systems even more than the tops, and such heavy applications of stimulants being necessary, would put facts before the nurseryman which would never occur to the average grower. I have had the above theory for a number of years, and have more or less proved its worth in a general way, and have accumulated a lot of information which would not be possible for an Apple-grower to collect unless he spent a mint of money in experimenting. I would like to see a thoroughly reliable test carried out under strict conditions, which would, in my mind, settle at least one very likely avenue of reducing our off seasons, and prove to us that there is no hope in that connection, or else it would prove that, up to a measure, our crops could be controlled. Although these remarks concern Apples, I would like to add that in July I have found very strong young underground growths on Apricots, Plums, and Prunes as early as June, and can see no reason why these trees should not be greatly benefited by a similar treatment.

"That a spring application should also be applied as well as the autumn application I will not question, but would look upon it as a necessity to keep the tree in good heart and assist in bringing the crop up to good standard sizes—as the nitrogenous manures are all of quick action, and two applications would be essential in any but very strong trees."

* * * * *

The foregoing details are set out in a nicely illustrated pamphlet issued by Nitrogen Fertilisers Pty. Ltd., 360 Collins-street, Melbourne. This company offers advice free, on the use of fertilisers, on request.

Citrus News and Notes.

Review of Crop Conditions in the Various Districts of New South Wales.

The following survey of the conditions prevailing as at September 6, 1930, in the citrus orchards of the State of New South Wales other than those within the Murrumbidgee and other irrigation areas, is supplied by the State Marketing Bureau of the N.S.W. Department of Agriculture:—

Gosford.—In the Mangrove Mountain locality a good proportion of the navel crop has been marketed and the fruit remaining is not hanging well. In the Peat's Ridge district the crop is very forward and marketing is expected to be completed earlier than usual. At Kulnura only a small quantity has been harvested, and in other centres little of this crop remains to be pulled.

The Valencia main crop is maturing well and although the yield does not promise to be heavy, quality and color are good. The intermediate crop is not expected to last much longer. Quantities of this fruit have softened and are falling freely.

The marketing of common Oranges is proceeding and in some parts the fruit is falling badly. There is still a fair quantity of Mandarins to be disposed of, and much of the fruit has been affected by the earlier excessive rains.

Good crops of Lemons are generally in evidence and a quantity of the fruit is being cut for curing. Late setting fruit promises to yield heavily.

Wyong.—A large quantity of the navel crop has been marketed and the trees are showing fairly heavy bloom. The marketing of Valencia main crop fruit has not yet commenced, and the blossoming on trees of this variety is neither heavy nor forward. Fair quantities of Lemons are yet to be pulled.

Windsor.—Some rain and a few frosts were experienced during the month. The latter did slight damage to the navel bloom in the Riverstone area, whilst in exposed orchards in the East Kurrajong district heavy winds caused a good many Mandarins to fall. Nearly all of the navel crop has been pulled and marketed. The main Valencia crop appears to be hanging well and ripening. Trees are beginning to show fresh growth. In the Kurrajong and Glossodia groves, common Oranges are mostly harvested, but in Riverstone orchards some considerable falling has been reported. Mandarins continue to be marketed, and many are soft and puffy with a tendency to dry out. Around Pitt Town good quantities of Lemons are still hanging, and indications point to a medium yield of summer fruit.

Richmond-Kurrajong.—Heavy bloom is showing on all Orange trees in this district. A fair percentage of the navel crop, especially in the Kurrajong area, has yet to be harvested, but little is left of the intermediate crops of Valencias and commons. The main crop of these latter varieties is light and commons are being marketed. Windy weather during the month was responsible for some falling of Mandarins and common Oranges in the lower Portland area and navels were similarly affected at Grose Vale.

Baulkham Hills.—Practically all navel and intermediate crop Valencia Oranges have been marketed. The main yield of the latter variety is not heavy, but the fruit looks very well, is hanging satisfactorily and nicely colored. The bulk of commons has been disposed of and those still on hand are showing signs of softness. The marketing of Mandarins is proceeding and much of the fruit has suffered as a result of excess moisture prevalent in earlier months.

Pennant Hills West.—Though the weather has been generally dry during the month, previous wet conditions are showing their effects on the Mandarin crops in this district. Heavy losses through scald have occurred, and in many orchards the fruit is dry and puffy. Navel trees are looking well and flowering profusely, though heavy fallings of fruit were reported from some orchards.

Castle Hill.—A few heavy frosts were experienced in the low-lying areas and slight damage was done to Mandarins, otherwise weather conditions were generally mild with an occasional high wind and a little rain. A few navel Oranges are yet to be picked; the bulk of the crop has already been harvested. The Valencia and common main crops are mostly light, being affected by the very heavy crops of intermediate fruit, some of which are reported to be drying out.

Fair to heavy Lemon crops of good quality fruit are showing.

Satisfactory bloom on most of the trees of the varieties mentioned is reported.

Hawkesbury.—The Valencia crop in the Mangrove Creek orchards is well colored, although showing coarseness as the result of previous flooding. In the Hawkesbury district the fruit is large and hanging well. Common Oranges are stated to be falling rather freely in the localities above mentioned. Many of the Mandarins appear to be drying out.

Hunter.—Weather conditions have been mild with occasional showers. The navel crop is practically all harvested and the trees are showing fair bloom. In the Copeland orchards the Valencias are well colored, but of varied size. Growers are slowly disposing of their common Oranges and in some parts this variety of fruit is falling freely. Lemons of good quality are being steadily marketed as they ripen, and there is evidence of a plentiful crop to follow.

Camden.—In the Orangeville area the marketing of navels, Mandarins, Lemons and some intermediate crop Valencias is proceeding. The quality of the navels and Mandarins is good to excellent, and with the latter growers are experiencing no trouble as regards puffiness. The Valencia trees are blossoming and next crop promises to be heavy. Mandarin trees look well and are carrying medium bloom.

Western District.—At Dubbo, Forbes and Narromine, the navel crop with the exception of a few Australian types at the latter centre has been marketed. The Valencia crop is hanging well, and medium to plentiful yields of good quality fruit are in sight. The quantity of Mandarins still to be harvested is light and the fruit is deteriorating.

VICTORIA.

Murrabit.

WITH regard to shipping fruit to New Zealand markets, the Murrabit Packing Company has endeavored during the past two seasons to establish a name for good quality citrus under their Blue Ribbon brand, the benefits of this policy are in evidence this season. Agents in New Zealand are cabling to the effect that their buyers are demanding Blue Ribbon owing to the excellent condition the fruit is arriving in, and the evenness of the standardised pack which is being put up by the growers through their shed pack. Cable from one city in the South Island asks for 1,000 cases per boat; on September 18 approximately 1,200 cases went forward.

The policy of the growers here is to only send first-class quality citrus, contending that the shipment of low quality fruit would be detrimental to the export trade. If all packing houses, Associations and individual growers adopted the policy of only sending good quality citrus instead of trying to unload low grade fruit in New Zealand, growers generally would reap the benefit of increased prices; low grade fruit will at all times lower the price of good packs.

Shipments from Murrabit are going forward to Wellington, Dunedin and Christchurch. Owing to the facilities available to the local growers through their up-to-date packing house, they have a large volume of good quality citrus available for export to New Zealand markets, approximately 97 per cent. of the growers are packing under the Blue Ribbon brand, which has already made a name for itself overseas. Enquiries have been received from England for consignments this season. Owing to lack of shipping facilities, no action was taken in this direction.

Growers consider that they are extremely fortunate in having in addition to their packing house, an excellent staff under the efficient management of Mr. D. J. Walters.

PLANTING ORANGE TREES TO MINIMISE WIND INJURIES.

A CORRESPONDENT at Mannum (South Australia) states that he is planting 300 Orange trees, and asks for the best plan to adopt in spacing the trees in order to reduce wind injuries to a minimum. The inquiry was submitted to the Chief Horticultural Instructor (Mr. G. Quinn), who suggests that the trees be planted on what is often called the "staggered" system, but is known to fruitgrowers as the

septuple or hexagonal method.

This method of allotment places the trees so that viewed diagonally the lines of trees run at an angle of 60 deg. in every direction.

For setting out a small area of reasonably even-surfaced land, all that is needed to peg it out accurately is to project a straight line along the outer edge of the headland—preferably along the highest side, if there is any slope on the land. Then take a wire—No. 10 galvanised is suitable—fix a fairly large ring on one end, and on the other fix a pointed stake. See that when the wire is stretched straight the distance from the outer edge of the ring to the centre of the pointed stake, i.e., at the point, is the distance apart the trees are to be planted. Measure with this the spaces on the base line, and drive a peg in at each position.

Then, starting at one end, drop the ring end of the wire over the first peg, draw it tightly, and describe an arc on the ground at what seems midway between the first and second pegs and where the second row is expected to be placed. Move the ring on to No. 2 peg and repeat the movement back over the same spot, and where this second arc intersects the first one is the exact position for a stake. Repeat this from each peg along the full length of the base line, then straighten up and firm this second line of stakes, and use them as a base line to project the next row, and so on across the field.

Two wires of the same length with a ring on each end can be used to define the tree positions. In that case, one end ring encircles adjacent pegs, and the outer ends stretched until the rings overlap, which gives the position for the peg.

Mr. Quinn suggests, if the land be deep and good, the trees be placed 24ft. apart on this septuple or staggered system. This will give about 87 trees per acre. If the soil is not calculated to grow large trees, set them 22 ft. apart septuple, which will take about 102 trees to cover each acre. The space devoted to the pegged-out headland is deducted from the plantable area.

If the trees are planted 24 ft. apart on the square and, as suggested, a fifth tree is set in the centre of the square made by each four it will form what is known to fruitgrowers as the quincunx system of allotment. This interplanting system would give about 137 trees as against 75 where the trees are in squares of 24 ft. each way. It would not only crowd the trees, but the cultivation lanes would be narrowed down to approximately 17 ft. in two directions, and 12 in two others, which certainly allows insufficient room for the trees to expand and a cultivator to be used between them.

If you wish to try planting a wind shelter, why not try a closely-set hedge of common bamboo reeds? They could be set within 25 ft. of the outside row of trees, and their roots do not spread long distances.—South Australian Journal of Agriculture.

CITRUS SCAB.

Spring Spraying Important for Clean Lemons.

CITRUS SCAB is a serious disease of Lemons particularly, especially in the N.S.W. coastal districts, but the comparatively short period during which the foliage and fruits are subject to infection makes it possible to protect the fruit very efficiently by spraying. This should be done with Bordeaux mixture, 6—4—100 plus 1 per cent. red spraying oil, as soon as possible after half, but before all, of the petals have fallen from the main crop blossom in spring. In bad attacks a second spraying should be given to the Lemon crop, which sets usually about January or February, and here again as soon as possible after half of the petals have fallen.

The oil should first be emulsified with an equal quantity of water, and then added to the Bordeaux mixture. A good pressure (120 lb. and upwards) is essential to ensure that the very young fruits are properly covered with the spray.

It is not advisable to apply the spray during droughty conditions. Bordeaux mixture tends to increase the liability of trees to scale infestation; but if the spray be applied chiefly to the outer fringe of foliage so as to cover the young fruit, and not applied heavily to the inside of the tree, this tendency will be prevented to some extent.

It is

dangerous to fumigate

within six months after spraying with Bordeaux, and if measures against scale are necessary in January or February a red oil spray must be used if spraying with Bordeaux has been carried out in the previous spring. It is safe, however, to apply Bordeaux after fumigation, and if spring spraying has not been carried out fumigation may precede the autumn spraying with Bordeaux.

Soil Fertility.

Summary of An Address by Frank Read, M.Ag., Sc., before the recent Fruitgrowers' Cool Stores' Association Conference at Burnley.

SOIL FERTILITY is not merely a matter of adding artificial manures, nor can a soil's requirements be estimated thereby by a chemical analysis—although by this means the general nature of the soil can be determined, as to the total plant food it contains, and whether it is sour or alkaline.

The physical condition of the soil is even more important because it decides largely, among other things—

1. Ease of root growth.
2. Moisture supply.
3. Availability of plant foods present.

The biological condition is also very important. Practically all soil processes are influenced by the vast mass of tiny organisms which abound in it. These are not there primarily for man's benefit, and if man is to turn them to his own use he must study their needs and habits. From this point of view the soil needs humus, which is their food, also good cultivation and aeration.

The Green Crop

for these reasons is one of the most important of the orchard practices. The addition of humus—

1. Improves physical condition.
2. Increases availability of plant foods (and legumes ultimately add nitrogen).
3. Supplies food for organisms.

The crop, however, is capable also of acting as a **drainage system,** and should always be present in wet districts, especially where waterlogging is suspected.

Sour soils and waterlogged soils are not necessarily the same.

A sour soil arises by depletion of the soil lime by the leaching action of rain, and is more often to be found at the top than at the foot of the hill. **It needs lime application.**

On the other hand, the waterlogged soil is often (though not always) in the valley when water from hill has seeped. Thus it may experience not leaching, but deposition of lime, and so does not benefit from lime applications. **It needs drainage.**

This drainage can usually be given very efficiently by the green crop previously mentioned. In bad cases tile drains as well may be necessary.

Artificial Fertilisers.

Does the tree absorb all through its growing period? Experiments first in cereals and later in vines, and indirect evidence from fruit trees indicate that the maximum absorbing period is the first six weeks to two months. Therefore, manures applied in early spring are probably more rapidly and economically absorbed than at any other time. In the case of nitrogeneous manures there are further reasons for early spring application. First, soil nitrogen is naturally lowest at this time of the year, owing to leaching effect of winter rains, whereas during warmer months soil organisms rapidly build it up and leaching is less. Second, high nitrogen in the sap at this time is thought to favor a good setting of blossom, whereas a low nitrogen content later in the season favors the formation of fruit buds which will flower in succeeding seasons.

For the foregoing reasons, therefore, quick-acting manures should be used in the spring, although autumn application with the green crop or to encourage miscellaneous herbage may be desirable even though the tree does not benefit directly. Nitrogenous fertilisers appear to be the most important. The quick-acting ones are sulphate of ammonia, nitrate of soda, and urea. The slow-acting ones are blood manure and fertilisers of a similar nature.

The suggested minimum dressing to each tree is 3 lbs. sulphate of ammonia applied a fortnight before blossoming.

Phosphoric acid is probably not so important, but on past experience it may be profitably applied in most orchards. The quick-acting varieties of this fertiliser are super., and, to a lesser extent, basic slag. Slow-acting are bone manure and ground phosphate rock. Dressing should be 3 lbs. to 5 lbs. super, to a tree, half with nitrogenous manure and half in autumn for the benefit of green crop or natural herbage.

Of potash fertilisers the quick-acting are sulphate and muriate. There are none of outstanding merit of slow-acting type. Of the three classes of manures mentioned, potash appears to be the least important. It is more favored for stone fruits. For these the suggested dressing is 1 lb. to 2 lbs. to the tree in spring.

Summing up, the order of importance of fertilisers, if for financial reasons the grower cannot provide all three, is—nitrogen, phosphoric acid, potash.

Coloring of Fruit.

Experts (particularly in U.S.A.) have failed to discover any manure or chemical which can be successfully claimed to improve the color of the fruit. Potash has a reputation for being able to do so, but in England where beneficial results had been achieved in combating leaf scorch of Apples, potash had been found to lower the color of the fruit. Elsewhere it had produced no noticeable effect. The color is influenced by climatic conditions, leaf growth, etc. This is demonstrated by comparison of the following types of Jonathan Apples:—Huon, less colored; S. Victorian, more colored; Harcourt, highly colored.

Mr. Read concluded his lecture by pointing out that there was a big field of investigation for every orchardist to observe the effect of manures. If anything of a perplexing nature arose which the fruitgrower was unable to thoroughly follow up, he was urged to bring it before the notice of the Department of Agriculture. The officers of the Department would welcome the opportunity of investigating anything of this nature in the hope of making discoveries which would be beneficial to the fruitgrower.

STABLE MANURE AND FRUIT TREES.

Replying to the Balhannah Branch of the Agricultural Bureau which asked, "What is the chemical action of stable manure on fruit trees?" the Chief Horticultural Instructor (Mr. Geo. Quinn), in South Australian Journal of Agriculture, says it is claimed by authorities on agricultural chemistry that a ton of a pure sample of stable or horse manure, which has not been leached by water or rain, or permitted to become excessively heated by fermentative action, and become what is known as "fire fanged," may contain as high as 17 lbs. of nitrogen, 13 lbs. of potash, 9 lbs. of phosphoric acid, and 10 lbs. of lime. The average sample of stable manure as handled and used here could not be expected to still retain these quantities, more particularly the nitrogen. The kind of food given the horses and the ages of the animals would also influence the quantities of these compounds found in the manure.

As far as our knowledge extends, it is generally conceded that it is not so much the gain received from the direct addition to the land of these plant foods from the manure itself that benefits the trees or crops, but the indirect actions it has on the soil body. The mass of

organic matter absorbs water

and holds it, whilst in its slow decomposition it liberates heat, and facilitates the formation of carbonic and humic acids, which in turn assist in breaking down insoluble mineral compounds containing plant foods, but which ordinary soil moisture could not bring into solution. Its physical action on the soil renders it friable, open, and aerated. It appears to be the essential medium for securing greater bacterial activity in the soil.

It is possible the results of this increased activity are the more direct cause of stimulating the growth of foliage, shoots, and fruits on our fruit trees than is the addition of the quota of the plant food elements mentioned above as being conveyed to the land in the manure itself.

THE LABEL SELLS THE GOODS.

A Factor of Successful Marketing.

SOME YEARS AGO the manufacturers of a proprietary line in America were alarmed at the inroads made into their sales of previous years by new concerns entering the field.

Investigation into qualities revealed that the old-established and standard line, offered equal value to consumers; retailers reported that they derived special inducement to push the newcomers' products; distribution methods were thoroughly up-to-date and operating smoothly and efficiently. Yet the new brands were capturing a large proportion of the business at an alarming rate, and every day consumers were drifting from the ranks of those who for years had remained loyal to the original makers and joining the armies under the banners of the competitors.

Why was the old favorite losing its appeal? What must be done to check the drift? The directors devoted considerable thought and spent many hours of discussion in endeavoring to find a solution to the problem, but without success.

Ultimately, in desperation, a sales promotion expert was called in, and the whole position placed before him Within a few days after his preliminary investigations, he presented himself at the office of the president of the company.

"I think I have solved your problem," he said quietly. "Can you come with me now to pay a few calls on retailers?" The president discovered that there were no pressing matters to be attended to for an hour or two—and anyway, this was too vital a matter to even contemplate delay. So he placed his hat on his head there and then and set out with the sales promotion expert to learn what weakness in their marketing policy the latter had discovered.

A few minutes later they were in a retailer's shop. "We will ask no questions," said the sales promotion man, "but merely rely upon our own observations. Notice the goods on those shelves," he went on indicating the fittings, running the full length of the store on which the president's line was displayed. "Can you pick out your particular goods at a glance?" To his mortification the president discovered that brand after brand of competitive lines attracted his eye before he noticed his own. Compared with the others, his cartons were dull, stodgy, uninteresting; whereas the others were bright, attractive, colorful, his were drab and cheap-looking.

The sales promotion expert turned to him and spoke: "Consider yourself for a moment a prospective buyer," he said, "you have no preference for any particular brand, but you glance at the store shelves to make sure the storekeeper stocks the particular class of article you want to buy. Look for yourself—would you decide upon the line in which we are interested? Now, come along, we will go to a few more stores." So they went to other retailers' premises, and in every case the president had the humiliating experience of the first call.

Back at the office, the sales promotor held out his hand. "Goodbye," he said, "you don't need me any more,—what you need is an artist and a high-grade printer. Get the artist in first and explain to him your experience of today. If you select a good man, your problem will be solved, for what you need is that greater attraction in presentation which your competitors have achieved." It is a matter of history that the old package was scrapped and substituted by a bright and pleasing one, which was immediately successful, and ultimately most of the lost ground was regained.

Simple as is the lesson of this story, how many fruitgrowers of Australia have learnt it? How many have identified their products with artistically designed cartons and labels? We hear the plea that cost of production of high-grade printing is out of proportion to results. This is a very narrow and short-sighted attitude to adopt, for if sales are not created by other methods than merely reliance upon the natural appetite for fruit. how is the fruit enterprise to progress? Let us create desire, not wait for the desire to come. And one way of creating desire, which throughout commercial history has never been known to fail is to display not merely the goods themselves, but the actual containers in an attractive and appealing manner. Does the label sell the goods? Most emphatically if the label is colorful and distinctive.

WHEN IT WAS DARK.

Why Did People Steal Fruit at the Hobart Show?

A curious trait in human nature was revealed during the Australasian Fruit Show at Hobart in May last.

During one evening the lights failed for half an hour. There was no panic, owing to the quick-witted action of the Secretary (Mr. Honey) in arranging for the band to keep on playing music.

When the lights came on again it was found that many of the fruit exhibits had suffered. Prize Bananas, Oranges. Apples and Pears had been stolen.

People, ordinarily honest, found the temptation too great They could take the fruit without being detected, and they did so.

Are we honest only because we are afraid of being found out if we steal?

Is there anything wrong with our system of teaching youth, and, in imparting knowledge are we missing character education?

Now you moralists, we ask you for your views on this subject.

Control of Green Peach Aphis (Myzus Persicae.)

Spraying Experiments at Blackwood Experimental Orchard, 1929.

(By R. Fowler, Manager, Adelaide and Coromandel Valley Experimental Orchards.)

THIS APHIS first made its appearance in large numbers in the Experimental Orchard in 1924, and that year did a very considerable amount of damage in practically all the Peach orchards in this and other States. In 1925, a number of winter spraying tests were made, but as, in the following spring, the infestation was a very light one, no very pronounced results were obtained, and in the winter, owing to pressure of other work, and a false sense of security from attack, the winter sprays were not continued. This was rather unfortunate, as it happened, because in 1929 another epidemic occurred, which almost threatened to wipe out the Peach trees themselves, and caused untold loss to Peach growers in South Australia, Victoria, and New South Wales. In the winter of 1929 spraying tests were again taken up, and new preparations tried.

Before dealing with the results, a few words about the life history of the insect will perhaps help us to understand more fully why a spray applied in the winter has some chance of success.

Considerable interest attaches to the green aphis species, as it furnishes a striking example of the summer migration of aphids to different food plants. This species, during the summer, feeds upon various vegetables and plants. We are told by entomologists, who have studied its life history, that the winter is usually passed in the egg stage on the Peach, though the wingless females may sometimes persist on the summer food plants, if weather conditions are not too severe. The eggs hatch very early in the spring, so that the young stem mothers from them are often almost fully grown before the earliest Peach blossom appears. About the time the buds begin to open the stem mothers begin to give birth to living young. Very few of this brood attain wings, but the third generation mostly become winged and begin to leave the Peach trees on which they were born, about November, and by early December have almost completely left the Peaches and gone to their summer food plants.

According to observations made by E. P. Taylor, in America the spring generations of the Peach become fully grown in about two weeks, and an individual aphid lives about a month. The winged females were observed to return to the Peaches at Blackwood in the very late autumn, when most of the leaves were falling.

Numerous specimens were under observation, both last autumn and this, and each was noticed to have a small colony of young, from eight to ten, which grew in size very rapidly. These developed into wingless females. The true males to fertilise these females are winged and migrate from the summer plants, we are told. It is from these females that we get the winter eggs which, as before stated, give rise to the stem mothers which start the spring generation.

With this definite information regarding the life history of green aphis, we know that the eggs are on the trees during the winter, and probably can be reached with a winter spray to destroy them, and that before the buds actually burst, and when strong sprays may still be used. The wingless female that gives rise to all the subsequent broods is also exposed to attack, and, therefore, when applying sprays at this time, we are attacking the insects with the most chance of effectively checking them. We all know the difficulty of doing this once the colonies are established in the newly-formed leaves.

The tests at Blackwood were designed with the idea of proving if a winter spray would materially assist in Peach aphis control, and which of a number of suggested washes would give the best results. The tests were nine in number. Each test consisted of two rows of Peaches, each containing 20 trees of various varieties, 28 of which were sprayed, and 12 were left as check trees.

The sprays used were (1) Volck Oil, 2 per cent. solution; (2) Kleenup, 4 per cent. solution (this is a winter spray oil prepared by Volck); (3) Gargoyle Special Spraying Oil, 1 in 25; (4) Gargoyle Red Spraying Oil, 1 in 25; (5) French's Formula (1 gall. oil, 1 pint Black Leaf 40, 1 lb. soft soap to 100 galls. of water); (6) 1 pint Black Leaf 40, 4 lbs. soft soap to 100 galls. of water; (7) lime sulphur, 1 in 12; (8) Rustica Salis (an Italian preparation); (9) Atomol Tobacco Dust, 3 per cent.

The sprays were all applied on August 6, 1929, when most of the flower buds were just commencing to swell. Two or three of the early flowering varieties were out in full bloom, and suffered rather severely from the oil sprays. The dusting was done on September 11, when the buds were more fully expanded.

As the experiments were carried out in part of the variety collection, it was abviously impossible to get any definite crop record, but notes were made from observations from time to time. Green aphis appeared in the spring in fair numbers, but nothing like the infestation of the previous year.

In Tests 1, 2, 3, and 4 where oil sprays were used, the results were very satisfactory, very little green aphis being noticeable, while some of the unsprayed check trees were rather badly infested. There was also an appreciable difference in the appearance of the foliage on the oil-sprayed trees, the leaves being larger, healthier, and of a darker green color than on the check trees. French's Formula in Test 5 displayed good control of the aphis, but did not affect the appearance of the trees as in Tests 1-4. In Test 6 Black Leaf 40 and soap, the sprayed trees showed few aphids, although some of the check trees were infested. The foliage did not appear to be affected. Considerable trouble was experienced with this mixture in the spray pump. The valves stuck continually, with resultant loss of pressure. Lime sulphur 1 in 12 in Test 7, apparently was not as effective as the oils or the Black Leaf 40, and there was no noticeable difference in the appearance of the trees.

Rustica Salis in Test 8 gave no outstanding results. Atomol Dust in Test 9 gave rather poor results from winter use only, more green aphis being noticeable in the rows treated than in any other of the Tests, with little apparent difference between the treated and the check trees. We know from previous trials that better results are obtained with this dust later, when the insects are more numerous on the trees.

During the coming season two new winter washes imported from England are to be tried, No. 1 being Wm. Cooper & Nephews Limited Tar Distilled Wash and No. 2 a similar preparation called "Mortegg," put up by Murphy & Son. These washes are reported to have given good results in England, New South Wales, and New Zealand against various pests.

South Australia.

Hills Producers in Conference.

AN EXCELLENT REPRESENTATION of delegates of Branches of the Agricultural Bureau met in Conference at Balhannah on August 28. Delegates to the number of over 100 were present from the following branches:—Ironbank, Uraidla, Clarendon, Lenswood, Blackwood, Balhannah, Gumeracha, Mount Pleasant, Tweedvale, Cherry Gardens, Longwood, and Scott's Bottom.

The Department of Agriculture were represented by Messrs. H. N. Wicks, H. S. Taylor, P. H. Jones, J. W. Sandford (members Advisory Board of Agriculture), Professor A. J. Perkins (Director of Agriculture), W. J. Spafford (Deputy Director of Agriculture), Geo. Quinn (Chief Horticultural Instructor), H. B. Barlow (Chief Dairy Instructor), District Instructors, and the General Secretary (Mr. H. C. Pritchard).

The Conference was presided over by Mr. E. Mattner, of the Balhannah branch. Mr. H. N. Wicks (Vice-Chairman of the Advisory Board of Agriculture) delivered the opening address.

Keen discussions arose from the reading of the following papers:—"Manures and Fruitgrowing," Mr. A. Peacock (Balhannah); "Dairying," Mr. E. Mattner (Balhannah); "Marketing Amendments," Mr. W. Bishop (Lenswood); "The Carob Bean," Mr. V. Tapscott (Mount Pleasant).

During "Free Parliament" the following resolutions were carried:—

"That the Waite Agricultural Research Institute be requested to initiate research work into the development of the fruit buds in the Apple, with a view to determining as to what period the wood bud changes into the fruit bud."

"This meeting desires to place on record its appreciation of the good work carried on in the Blackwood Experimental Orchard and trusts that the Government finds sufficient funds to ensure continuity of this work."

"That this Conference heartily supports the action taken by the Fruitgrowers' and Market Gardeners' Association in their efforts to bring about a better position from the fruitgrowing point of view in the sugar industry."

"That this Conference emphatically disapproves of the present agreement between the Commonwealth Government and the Queensland sugar interests, and strongly urges that the agreement be not renewed."

"That the Advisory Board of Agriculture be requested to bring the foregoing resolution under the notice of the Sugar Inquiry Committee appointed by the Prime Minister."

"That steps be taken to investigate the possibility of controlling fruit crops by systematic manuring."

The evening session was occupied with an address, illustrated with lantern slides, "Principles of Pasture Improvement," by Mr. H. Trumble, M. Agric. Sc. (Waite Research Institute).

It was decided to hold the 1931 Conference at Mt. Pleasant.—S.A. Journal of Agriculture.

The Berri branch also wrote requesting that an effort be made to secure the services of Mr. A. V. Lyon, of the Merbein Research Station, for lecturing to growers.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Executive Committee of the South Australian Fruit Marketing Association was held on August 29, and there was a good attendance of members.

Central Council.—A letter received from Mr. R. E. Boardman, Secretary of the Australian Conference of Fruitgrowers, in reference to the formation of a Central Council, was considered, and it was resolved that it is desirable that a Central Council representing all States should be formed, and that a conference be held for the purpose of drawing up a constitution to bring all Associations together in an Australian executive. As the Victorian Fruit Marketing Association was preparing a constitution for submission to the organisations in the other States, it was decided to defer further consideration until this constitution was received, and after this Committee had had an opportunity of considering the proposed constitution, the question of representation at the proposed Interstate Conference, and the time and place for the gathering would be considered.

Expenses of Country Members.—It was resolved that, commencing with this meeting, country members should be reimbursed by the Association their out-of-pocket transport fees for all Committee mettings attended, to the amount of the public transport cost.

Levies.—The Secretary reported that levies actually paid to date represented 70 per cent. of the total export of fruit for the season, and it was anticipated that levies on a further 10 per cent. would be paid.

Sugar Enquiry Committee.—Strong disapproval was expressed at the action of the Federal Government in disregarding the request of the vast majority of fruitgrowers of Australia in appointing as a member, Mr. Young, instead of Mr. Boardman. Mr. Young represented a proportion of the fruitgrowers of the Goulburn Valley and southern New South Wales, while all the States, except Queensland, and these two districts (plus possibly one or two small Associations elsewhere), had nominated Mr. Boardman. The President reported having sent a telegram of protest to the Acting Prime Minister, and he had also placed the facts before the Hon. George Laffer, M.P., patron of the Association. The Association is co-operating with other Associations throughout Australia, and asking that Mr. Boardman should be appointed as an additional member of the Committee.

Pear Shipments.—It was resolved that preliminary inquiry be made in regard to securing space for Pear shipments in 1931. An endeavor is being made to secure an option until October, for three shipments of approximately 10,000 half cases each, for the 1st and 3rd week in February, and the middle of March.

AGRICULTURAL DEPARTMENT AND PRODUCERS.

"The Value of the Agricultural Department to Primary Producers" formed the subject of an interesting address by Prof. A. J. Perkins, Director of Agriculture, South Australia, before the Quorn Agricultural Bureau recently.

Prof. Perkins stated the function of the Department could be broadly grouped thus:—

(1) The study of technical and economic problems affecting rural production.

(2) Education and propaganda work.

(3) Administration of special Acts affecting rural production.

(4) Social work in relation to primary producers.

Australian Dried Fruits Industry.

DURING THE PAST FEW WEEKS there has been much activity in the dried fruits industry, and several important conferences have been held, and it is quite evident that every effort is being made to stabilise the industry.

Mr. J. Gunn, Director of Development, presented to the Federal Government an exhaustive report. With many of Mr. Gunn's deductions, however, the Australian Dried Fruits Association is not in full accord.

The Federal Government decided against the stabilisation proposals which were submitted by the A.D.F.A. It appears to be now recognised and accepted that no further financial help can be secured from the Federal and State Governments.

Following on Mr. Gunn's report, an important conference was held at Melbourne at the end of August, when committees were formed to deal with particular items for presentation at a further conference to be held early in November.

Personnel of Sub-Committees.

To deal with costs of fertilisers, spray, harvesting material, agricultural implements and duplicates:—Messrs. Malloch (convenor), Murdoch and Farmer.

To deal with the wages question in relation to the A.W.U.:—Messrs. Power (convenor), Lawrence and Nicholas.

Packing and selling costs:—Messrs. Balfour and Farmer for Victoria, Messrs. Russell and Murdoch for S.A., Mr. Westmore for N.S.W., and Mr. Yeates for W.A.

Elimination of unprofitable acreage:—Messrs. Malloch (convenor), Lawrence and Nicholas.

OPPRESSIVE ARBITRATION COURT AWARDS.

ONE of the outstanding difficulties which stand in the way of the healthy development of the dried fruits industry is the Arbitration Court, with its cast-iron awards. Many block-holders would like to receive regularly the weekly wage of £4/4/- per week which must be paid to laborers. The Federal Arbitration Court is one of the outstanding follies of Australia's national existence.

DRIED FRUIT DIPS.

Uniformity is Desired.

UNIFORMITY IN DIPPING methods was recommended at a conference from Mildura on September 23. The subject was introduced by Mr. H. D. Howie (Chairman of the Australian Dried Fruits Association), who said it was necessary to restrict the dip formulas to three or four. In one district where only one dip was used the growers received excellent returns.

After a full discussion the following resolutions were agreed to:—

That in the light of past experience, three standard dips were sufficient for Australian conditions, and that more were undesirable. The variation in dips devised by individuals or small communities had resulted in a multiplicity of dips without any compensating advantage, increased cost of production and increased difficulties in marketing.

That the three standard dips be cold, modified hot caustic and mixed. That cold dip be a solution of 1 lb. carbonate of potash in 2 gallons of water with an emulsion of oil; that the solution of caustic soda shall be used at a temperature of 192 deg. with variations of not more than 3 deg. and at a concentration sufficient to slightly crack the skin.

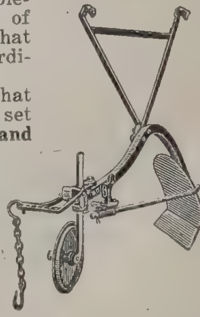
That the mixed dip shall be a solution of caustic soda, carbonate of potash and olive oil; the caustice soda shall be sufficient to slightly crack the skin at 182 deg. with variations of not more than 3 deg.; that carbonate of potash shall be 2½ lb. to 50 gallons and oil sufficient to avoid harshness.

It was further requested that Mr. A. V. Lyon, Commonwealth Research Officer, after consultation with the Departments of Agriculture, prepare an advisory pamphlet descriptive of the preparation and use of the standard dips. The modified caustic dip was recommended as the standard.

Mr. L. Cleary stated the Johnson dip had proved very satisfactory. Mr. J. B. Murdoch stated that the investigating committee did not preclude the use of the Johnson dip. If it made good over a number of years, no doubt the growers would universally adopt it.

A Boon to Vignerons!

THE SUNVINE
Mouldboard Plough



This specially designed implement will cut out the strip of ground beneath the vines that is left unploughed by the ordinary plough.

The Beam is turned so that Mouldboard and Share are set out on nearside, and **the land is cultivated right up to the vine stems**, while horse and man walk clear.

Cuts furrow to any reasonable depth and 10 inches wide.

A spring-mounted Fender Rod prevents the share from striking vine stems or posts.

Over 400 Sunvine Ploughs were sold last season.

Price only £4 - 7 - 6
Less 5 per cent. for Cash.
Delivery on Rails Sunshine, Sydney, Adelaide, or Perth

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Sunshine Harvester Works, Sunshine

N.S.W. DRIED FRUITS BOARD.

A MEETING of the N.S.W. Dried Fruits Board was held at the end of August. There were present Messrs. G. J. Evatt (Chairman), E. J. Hudson, and R. A. C. Freeman.

"Buck" Currants.—It was decided to prohibit the sale of Buck Currants, except for distillery or manufacturing purposes. That no Buck Currants be permitted to be removed from the packing shed in the absence of authority in writing from the Board. That Buck Currants used for distillation purposes be counted as part of the "export quota." That Buck Currants used for manufacturing purposes be regarded as part of the "home quota." That satisfactory evidence in all instances is to be submitted to the Board as to the purposes for which Buck Currants are used.

A request was received from the Interstate Conference that steps be taken to have all dried vine fruits brought within the definition of the Dried Fruits Acts. This recommendation would embrace sun-dried loose Muscatels. In view of the small proportion of dried vine fruits other than those already controlled, namely: Currants, Sultanas and Lexias, it was decided to take no action at present.

It was decided that export parity price be paid in connection with the compulsory acquisition of dried vine fruits found at unregistered packing sheds at North Yenda.

Members were pleased to note that the Commonwealth Dried Fruits Export Control Act had been amended to give separate representation to N.S.W. on the Control Board.

N.S.W. Pack Statistics.

A statement submitted to the Board showed that the following quantities of dried vine fruits were received into New South Wales packing sheds during the current season up to August 21.

	Currants. Tons.	Sultanas. Tons.	Lexias. Tons.
M.I.A.	124	1,201	1
Rest of N.S.W...	238	757	95
	362	1,958	96

During the 1929 season the following fruit was processed at New South Wales sheds:—

	Currants. Tons.	Sultanas. Tons.	Lexias. Tons.
M.I.A.	168	1,307	6
Rest of N.S.W...	216	596	59
	384	1,903	65

The figure for the 1930 season representing the fruit grown in New South Wales and processed in Victorian packing sheds are not yet available, but during the 1929 season the following fruit grown in New South Wales was processed in Victorian sheds:—

Currants, 164 tons; Sultanas, 878 tons; Lexias, 191 tons.

Fruit Shipments
United Kingdom
and the Continent

W. D. PEACOCK
& CO.
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CONFERENCE AT NYAH.

THE Victorian Conference of the Australian Dried Fruits Association was held at Nyah, on Sept. 9. Delegates were present from Mildura, Red Cliffs, Merbein, Nyah, Woorinen, and Coomealla. Mr. O. S. Johnstone (Mildura), was chairman. It was urged that the Federal Council consider the insurance of fruit on grades, with a view to the Board of Management going thoroughly into the question. A discussion ensued on the situation in New South Wales, and the feeling was that if the fight went on through New South Wales growers not falling into line regarding export quotas, it would be disastrous to the industry in that State, and prices would be down to the world's parity.

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Arbitration Court awards were discussed, in conjunction with a reduction of production costs. It was maintained that for the industry to be carried on costs must be reduced, but it was thought that the time was not quite ripe to ask for a reduction in wages until the cost of living was definitely on the downward trend.

It was agreed that all towns adjacent to producing centres be supplied with fruit direct from those centres.

Other resolutions passed were:—

"That it be a recommendation that dried fruits be sent to Canada with the object of increasing the sale, and that the Control Board be urged to take up the matter."

"That the Council of Scientific and Industrial Research be urged to assist the industry in respect to the use of low-grade dried fruits as by-products.

"That the Conference recommends packing-sheds to make a maximum packing charge of about £4/10/- a ton on dried fruits."

A.D.F.A. ANNUAL MEETING.

The annual Federal Council meeting of the Australian Dried Fruits Association will be held at Melbourne on October 28. Delegates will attend from Victoria, New South Wales, South Australia and Western Australia.

PERSONAL.

Mr. H. D. Howie, Chairman of the Australian Dried Fruits Association, is very active on behalf of dried fruit producers. He attended the recent conferences at Melbourne, Mildura, and Barmera. His activity on behalf of the dried fruits industry is greatly appreciated.

Mr. H. S. Taylor, editor of the "Murray Pioneer" and the "Australian Dried Fruits News," is at work again after his recent illness. Mr. Taylor is a host in himself. He is a constructive force on behalf of the industry.

Mr. F. L. McDougall, now of Australia House, London, is warmly commended throughout the entire dried fruits industry for his appreciated services in assisting to bring about British preferences for Australian products.

ROSY-CHEEKED CHILDREN.

They Eat Plenty of Dried and Fresh Fruits.

LAST month we told of a man of 63 who ran in a cross-country race of 20 miles without stopping, yet at 52 he was a broken-down man through wrong diet. His diet now consists of fruits, nuts and fresh vegetables. He specially commends raisins.

We saw a family of four rosy-cheeked children, active, happy, vigorous little folk, doing well at school and at sport. On enquiry we found that they eat meat only occasionally. Fruits, nuts and fresh vegetables form the principal diet. Each child eats about 2 lbs. of raisins per week. Lexias are specially enjoyed. The fruit is washed and the children crunch them, seeds and all. Other fruits which are freely used are Oranges, Apples, Bananas, Pineapples, Prunes, dried Prunes and Peaches—in fact, the whole range of fruits, also vegetables.

After all, we can't improve on Nature's healthful ways.

TRADE WITH NEW ZEALAND.

THE Commonwealth Dried Fruits Control Board is endeavouring to secure a larger share of New Zealand's importations of dried fruits. In round figures the Dominion imports 4,500 tons of dried fruits. Of this quantity Australia supplies about 2,000 tons, and foreign countries, particularly America, supply 2,500 tons.

In a recent letter to the New Zealand authorities the Board pointed out that Great Britain affords Australia the substantial preference of £7 per ton on raisins. Canada grants even greater preference of £14 per ton. New Zealand at present grants nothing, although there is provision in the N.Z. tariff for a duty which, if brought into operation would mean a protected market for Australian dried fruits. This duty, however, has been suspended for many years.

Continuing its statement, the Board points out that Australia produces around 70,000 tons of dried fruits. About 12,000 tons are consumed in the Commonwealth, leaving 58,000 tons for export. Great Britain takes about 50,000 tons per annum. Canada, as a result of protection, is now taking 5,000 tons, and it is hoped this quantity will shortly be increased to 10,000 tons.

The New Zealand Government has in this matter the opportunity for a friendly gesture towards inter-Empire trade, thus directly benefiting the 15,000 to 20,000 persons directly interested in the industry in four of the Australian States.

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AUSTRALIAN DRIED FRUIT OVERSEA SALES.

The Commonwealth Dried Fruit Export Control Board advise that 794 tons Australian dried fruit, valued at £32,750, were sold in Great Britain during the week ending September 18.

Sales included 297 tons currants, averaging £37/1/8 per ton; 411 tons sultanas at an average of £45/8/4 per ton. In addition, a small parcel of 48 tons old season's sultanas realised £35/16/8 per ton, and 38 tons lexias made £37/6/8 per ton.

Shipments of the 1930 harvest to date stand at 39,068 tons, against 42,877 tons at the same date last year. Of 12,510 tons currants included in the shipments, 6,092 tons have been sold, the average to date being £41/8/9 per ton.

Tasmanian News and Notes.

IMPORTANT CONFERENCES of fruitgrowers were held at Hobart and Launceston during August.

Sir Walter Lee, in opening the Hobart Conference, said that Tasmania had protested against some of the new export grading regulations, and a promise had been obtained that the operations of the proposed amendment to the regulations had been postponed until further information was obtainable. He looked forward to receiving the report of the Royal Commission. Growers had to be careful that they did not get themselves into a worse position than they were already in. (Hear, hear.) There was the pooling system, and another system of using the available mercantile machinery. He personally favored the system which gave the growers greater control over their own products. Growers could thus say who should sell their fruit and where it should be sold.

The Chairman read the report and balance-sheet. There was a credit balance of £1,152 derived from the levy of the sixteenth of a penny per case on Apples exported. Seventy-five pounds had been voted for assisting in the sale of Black Currants. The total expenditure was around £1,000. Some years ago the Board had authorised the levy of 1d. per case on Apples exported, and thus the sum of £5,000 had been raised. With accumulated interest this had grown to £7,390, and could be used in any emergency.

The Federal Government was using unfair discrimination in the matter of bounties. The sugar burden cost Tasmania £1,000 a day, and strong protests were being made.

Method of Election.

It was decided that the election of the State Fruit Advisory Board be conducted by the Agricultural Bureau on the present franchise, the existing Board to remain in office till the new Board is appointed.

Export Control.—Mr. H. B. Saunders said that on experience available from New Zealand and South Australia he had drawn up a Bill for the control of the fruit industry in Tasmania. N.Z. Apples were bringing 2/- a case more than Tasmanian because of better organisation; yet Tasmania grew the best Apples in the world. He moved that the Minister for Agriculture be requested to bring in a Bill giving growers absolute control of their

Married man, R.S., 31, strong, with life experience all classes fruit culture and exporting—Apples especially, wants position. First class references available; experience engineering and irrigation; licensed driver.—"Jonathan," "Fruit World."

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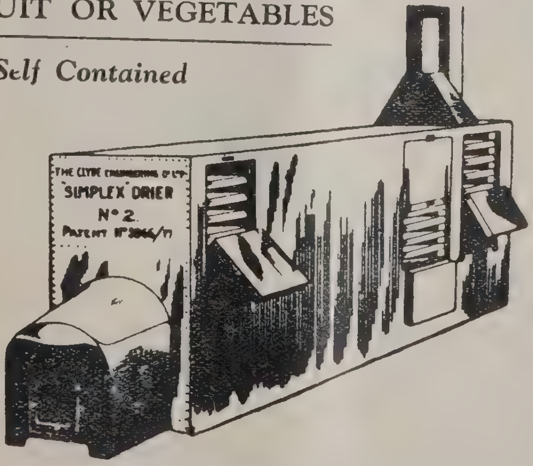

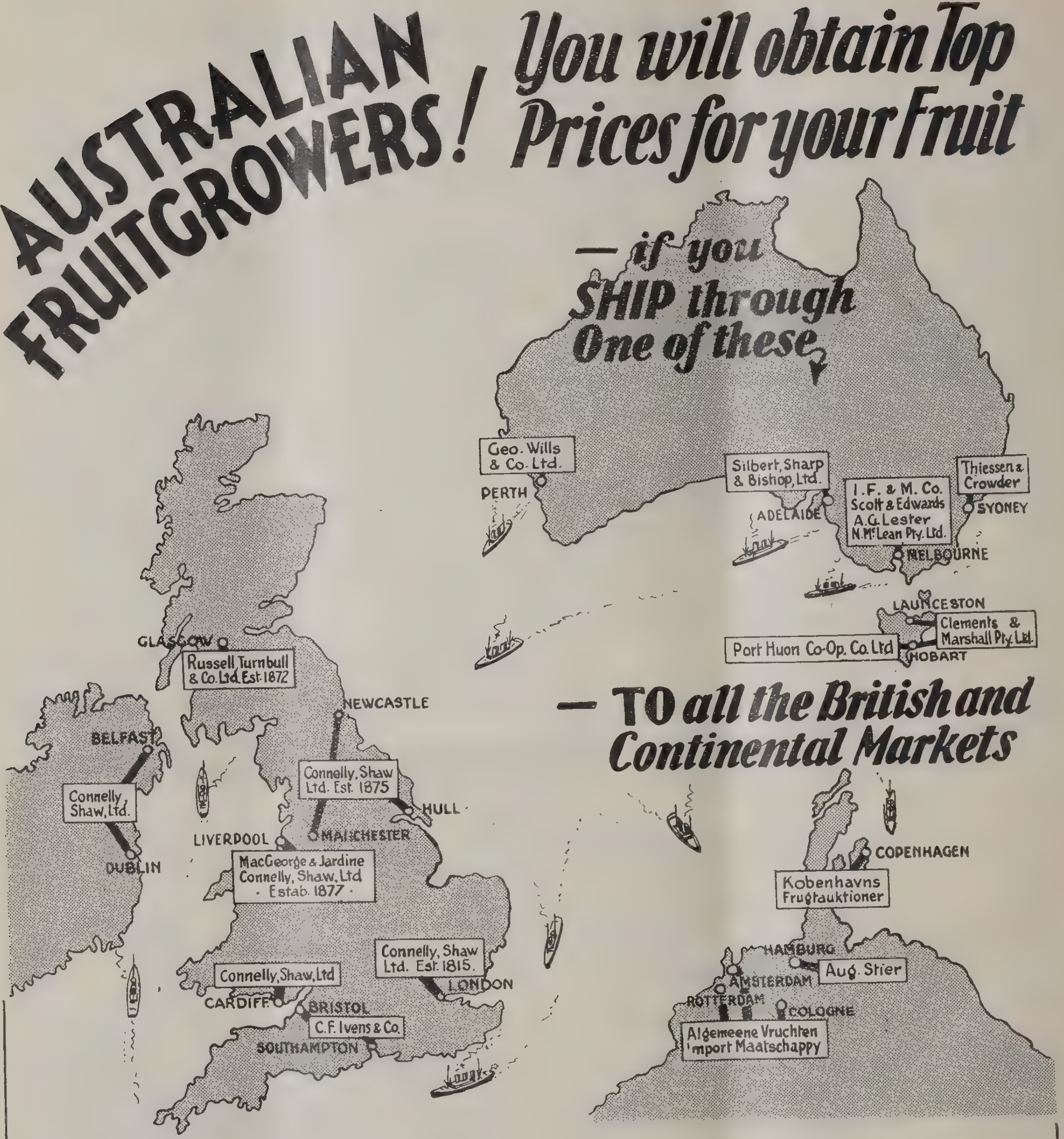
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own industry: that a levy on all Apples and Pears exported of three halfpence per case be authorised to defray costs of administration.

The subject was debated at length, delegates speaking for and against: it was finally decided on the resolution of Mr. V. W. Shoobridge to obtain legal advice on the constitutional aspect.

Apple Export Bounty.—A resolution in favor of an export bounty of 1/- per case was negatived by 33 votes to 23. Those favoring the motion pointed out that other industries were receiving bounties and Tasmanian fruitgrowers should get their share.

Those opposing the motion contended the bounty system was economically unsound: the first necessity was to reduce the cost of production.

Apple Export.—Resolutions were agreed to requesting the overseas shipping space contract to be made binding on both parties; and for an investigation into the condition of the holds of the "Trojan Star."

"PLAIN" GRADE APPLES.

Conference Rejects Motion for Elimination.

Mr. S. J. Bisdee, on behalf of the Bagdad Co-operative Association, moved:—

"That it be a recommendation from this Conference to the Minister for Markets that the 'Plain Grade' be eliminated from overseas fruit shipments, and that 2⅛in. Apples of colored varieties be allowed to be packed as standard grade fruit."

Mr. Bisdee said that it was his opinion that all 2in. fruit could be eliminated by proper orchard practice. It had been done successfully at Bagdad, one of the driest fruitgrowing districts in Tasmania. Judicious thinning would have the desired effect. He considered that 2in. fruit was largely responsible for the bad impression created overseas by some Tasmanian fruit.

Colonel Blacklow seconded. He said in 1924, when he was shown some Tasmanian Apples in England alongside some New Zealand Apples, he was ashamed of them. Tasmanian orchardists had to produce something better in order to compete successfully on the overseas markets.

Mr. H. G. Harris said that plain 2in. Jonathans sent overseas by him last season brought prices equal to 2½in. Jonathans and higher than 2¾in. Jonathans. When they could get profitable prices for plain grade fruit, why should they talk about eliminating it?

Mr. Hall spoke in opposition to the motion. Standardisation had been a burden to growers in some respects, and prices had not been as good as they were before standardisation was introduced.

Mr. Watson (South Arm) opposed the motion. He was a small grower, and could not afford to lose the 10/- or 13/- a case which the standard grade fruit brought in.

Mr. M. Calvert said that New Zealand had found it paid to send 2in. fruit away, and there was no reason why Tasmania should eliminate the plain grade.

Mr. R. W. Shoobridge said 2in. fruit should be classed as standard grade, and found a readier market in London than the larger fruit.

Mr. Bisdee said it was very detrimental in years such as the present for a lot of 2in. fruit to go forward.

The motion was lost on the voices.

TASMANIAN FRUIT CROPS.

Neglected Orchards.

Red Spider Prevalent.

THE WARM MILD WEATHER experienced during the last week has encouraged the early development of insect pests, particularly the red spider.

A number of specimens of young growths were recently obtained by the Chief Horticulturist (Mr. P. H. Thomas) from some neglected orchards which were literally swarming with the newly-hatched insects, and examination showed the foliage was already suffering from their depredations, being brown and discolored.

The species at present attacked the trees is Bryobia pratensis, a non-webspinning spider that over winters in the egg form, on sheltered portions of the bark.

Recent experiments have demonstrated the best control of these insects is obtained by the application of a strong oil emulsion (1-10) or lime sulphur (1-8), which is put on the trees as late as possible before the buds burst. This is the vulnerable period in the life cycle of the insect, as at this time the eggs are hatching and the full effects of the ovicidal and insecticidal sprays are obtained. While these sprays account for the majority of the insects, a number always escape the treatment, no matter how carefully they are applied, and a second spray is necessary. This is provided for in the spraying programme by the lime sulphur spray (1-20 to 30), which is applied at the "pink stage," and following the "green tip" Bordeaux for black spot.

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The new price will be **£12/12/0** per ton free on rails, less 2½% for cash, and at this price supplies of Sulphate of Ammonia can be obtained, as usual, from all fertiliser manufacturers or their agents or direct from the Metropolitan Gas Co., 196 Flinders Street, Melbourne.

Sulphate of Ammonia literature, and advice regarding the use of fertilisers direct from :—

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360 Collins Street, Melbourne.

Lime sulphur is a dual purpose spray, possessing both insecticidal and fungicidal qualities, and besides controlling the black spot, will account for the later hatched spiders.

From the "pink period" onwards the spraying programme will vary according to the season. If warm, dry weather is experienced, insect pests will be troublesome, and it may be advisable to utilise a combined spray of arsenate of lead and white oil emulsion to combat them. Under moist and humid conditions fungus diseases are prevalent and will necessitate further treatment by atomic sulphur or weak solutions of lime sulphur.

RAISING BENEFICIAL INSECTS.

Value of Electrical Heating.

ENTOMOLOGISTS in the Agricultural Department of the State of California and engineers of the Southern California Edison Company have developed a new use for electric heat. Orchardists and growers of all types of vegetables have long had difficulty with an insect known as the mealy bug. In some localities this bug has become a very serious menace. In attempting to devise means of combating this insect, it was discovered that the small Cryptolæmi, commonly known as the ladybug, lived almost exclusively on the mealy bug. With this as a basis, a plan was decided upon to make ladybugs available in large quantities for the agriculturist.

In the development of this programme carefully ventilated rooms were built, 18ft. long by 8ft. wide by 8ft. high. In these rooms two tiers of racks were placed, and upon these are placed shallow trays, 15in. square by 5in. deep. It is customary to have about 150 of these racks to the room.

It is essential that the temperature in these rooms be under absolutely accurate control. Several installations for this type of ladybug culture have been in operation in California, using gas or oil, but due to fire hazard and the difficulty of maintaining constant temperature, electric heat is rapidly coming into favor.

There are three distinct periods in the process of raising the ladybugs. The trays are first filled with potatoes imbedded in moist soil suitable to produce sprouting. The room is then held at a temperature of 70 deg. for three weeks. With a good crop of potato sprouts ready, the second or infesting stage in the process begins. A few mealy bugs are freed in the warm room and the temperature raised to 80 deg. and held there for two weeks. The mealy bugs multiply at an astonishing rate, and by the end of two weeks practically the entire crop of sprouts has been devoured by the ever-increasing horde of mealy bugs. Then the third stage begins. A number of ladybugs are freed in the room, and for the next seven weeks the temperature is maintained at 75 deg. These few ladybugs with the vast number of mealy bugs to be eaten multiply rapidly. At the end of the seven-week period the ladybugs are captured and placed in capsules, ten to each capsule. The capsules are then sent out to the agriculturists and the ladybugs freed in the orchards to combat the mealy bug menace, about ten ladybugs per tree being required.

From the standpoint of the central station, each warming room represents a load of 4kw. in operation 24 hours a day for a full twelve-week period for each cycle of ladybug development. Each incubating room has a capacity of approx. 125,000 ladybugs per twelve-week cycle. Fifteen county citrus associations and privately owned insectories are now engaged on a commercial scale in the production of this ladybug Cryptolæmi. Present estimates indicate that approximately 2d. per insect is being spent on this work.

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I find the "Fruit World" a great book for the fruitgrower.—(Signed) M.E.M., Thulimbah, Q'land.

Seek to cultivate a buoyant, joyous sense of the crowded kindnesses of God in your daily life.—Alexander MacLaren.

* * * * *

Serene will be our days and bright,
And happy will our nature be,
When love is an unerring light,
And joy its own security.—Wordsworth.

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Queensland Fruit in Melbourne.

THE tonnage of fruit which arrived from Queensland up till Saturday, September 27, was 1,620 tons, consisting of Bananas, Pineapples, Papaws, Beans, Tomatoes, Passion Fruit, Sugarcane, Mangoes, Cape Gooseberries, Grapefruit and Cucumbers.

The quality of the Bananas arriving is still very good, and it is reasonable to expect that future supplies will also be of good quality, owing to the favorable weather conditions being experienced in Queensland.

The arrivals of Beans have lightened, and there are coming forward a number of brands which are too old to realise satisfactory prices.

The Cucumber season is beginning in Queensland, and it is expected that supplies will increase from now on and that heavy supplies will be received this season.

The small amount of Cape Gooseberries were bought up regularly, as there are few people who know the delicacy in flavor of this fruit. This fruit is readily made into pies, tarts, jams and jellies, and is very palatable.

Further supplies of Mangoes are expected, and it is hoped that an improvement will be made in the varieties sent forward.

The arrivals of Papaws are receiving more attention from the growers' end and there are quite a number of cases arriving which are in a very nice condition.

Myer's Emporium Ltd. are making a feature of Papaw sales, and have received from Queensland some very fine samples.

At the recent Melbourne Royal Show the Committee of Direction of Fruit Marketing showed two bunches and three cases of good quality Cavendish Bananas which were grown at Nambour and were ripened in the experimental rooms at the Melbourne University in conjunction with the Commonwealth Council for Scientific and Industrial Research.

There were numerous comments on the quality and condition of this exhibit, many saying they had not seen such quality for many a day.

Care Needed in Picking Pears.

Punctures caused by twig injury and from finger-nails affected the carrying condition of Pears exported last season.

Some growers regularly inspect the finger-nails of employees during packing operations.

Many growers are now favorably considering the use of gloves for picking and packing.

Fruit Export Wastage.

Losses in Shipment from Canada to Great Britain.

Investigations by Empire Marketing Board.

DURING THE PAST THREE YEARS the Empire Marketing Board has carried out a systematic survey of the nature and extent of deterioration in imported fruit.

The results of the investigations into the deterioration in transit of fruit from Canada and the United Kingdom is contained in a bulletin issued on June 30 last, copy of which was received by the "Fruit World" by courtesy of Mr. A. W. Burton, Officer in Charge of the Victorian Trade Commissioners' Office, Melbourne.

Apples are imported into the United Kingdom from three Canadian provinces—Nova Scotia, Ontario and British Columbia. Shipments commence in September and finish about March or April. British Columbia Apples are packed in the wired bushel pinewood box, which is also universally employed in New Zealand and Western U.S.A. The internal measurements of the box are 18in. x 11½in. x 10½in., and the full bushel content is only achieved by means of a slight bulge on the top and bottom boards, which are made of thinner wood than the rest of the box. This bulge takes up any shrinkage which occurs in the fruit, and the pack, therefore, remains firm for a considerable time.

Many instances have been observed, however, when the bulge was excessive and the pack so tight that the contents had been severely bruised in spite of the protective layer of plain or corrugated cardboard interposed between the lid and the outside layer of fruit. Apples injured in this way are frequently invaded by rot-producing fungi.

The Apples are individually wrapped in oiled or plain paper and packed in the well-known diagonal manner, the number of Apples, variety, grade and car-lot number being stamped on the outside of the box. Three quality grades are packed: Extra Fancy, Fancy, and C Grade.

Eastern Canadian Shipments.—Rotting appears to be of greater importance in barrelled than in boxed Apples, and constitutes the principal cause of wastage in the former class of fruit. Many consignments of barrelled Apples arrive in very sound condition and develop little wastage for some considerable time afterwards, but there is reason to believe that, in some instances, rotting increases rapidly, more especially if the fruit has reached an advanced stage in its storage life.

Summary of Investigations.

Apples.

(1) In some consignments of Canadian Apples examined on arrival fairly extensive deterioration due to fungal

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Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
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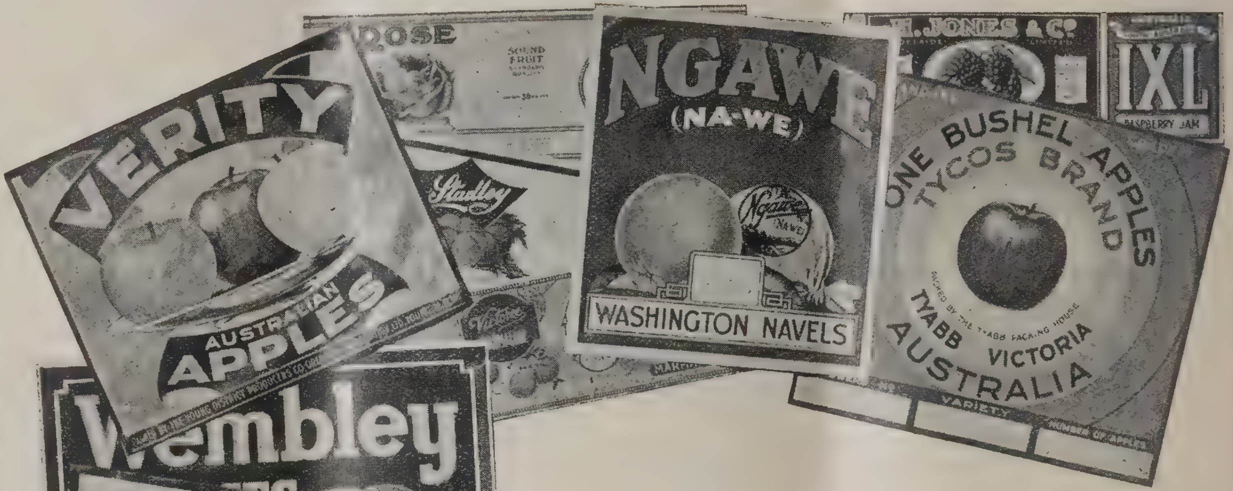

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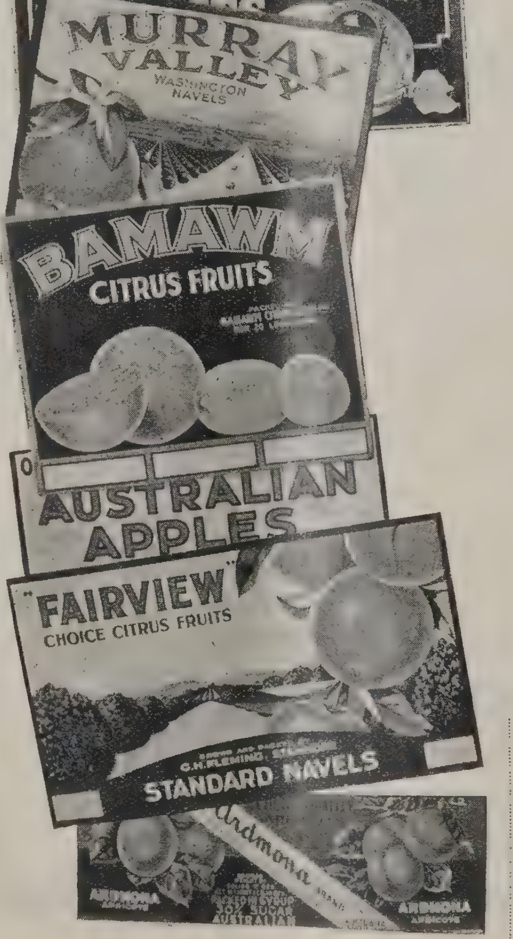

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INDIVIDUALITY! The greatest factor in successful selling. How can you achieve this ideal in the marketing of your fruit? Colorful, artistic case labels will reflect the high standard of quality you have aimed to be associated with your products.

We are specialists in the creation of attractive labels for fruit cases. We have the artists and equipment to supply labels that compare favorably with the best American productions. All of our labels are specially varnished to render them waterproof and thus ensure permanent adhesion to the case.

Fill in the coupon below and let us send you, WITHOUT OBLIGATION, our Catalogue comprising a range of the high-grade colored labels we have printed.

McGILL Pty. Ltd.
56 Clarendon St., South Melbourne, S.C.5, Victoria

Please send me your Catalogue of colored Fruit Labels.

Name..

Address..

rotting, scab, and internal breakdown was observed. Other types of wastage noted include bitter pit, Jonathan spot, surface scald, soft scald and water core.

(2) Fungal rotting appears to be the most serious cause of deterioration, particularly in barrelled Apples, where extensive mechanical injuries, apparently sustained in packing, greatly facilitate the ingress of fungi. It seems important that "pressing down" and other packing processes likely to injure the fruit should be reduced to the minimum compatible with securing a pack sufficiently firm not to settle away from the head of the barrel. As conditions inside the barrel are particularly favorable to the development of rotting, packing should be delayed until the latest possible date before shipment.

Over-mature Apples are liable to develop rotting very rapidly when packed in barrels, and should not be shipped long distances in this type of package.

(3) A large proportion of Eastern Canadian Apples of the lower grades are seriously disfigured by scab. The control of this disease appears to be one of the most serious problems of the industry, and further efforts in that direction are urgently necessary. Relatively little scab was observed in British Columbian shipments.

(4) Internal breakdown, mainly it appeared of the Jonathan type, was observed in many varieties of Apples from all provinces, and was responsible for serious losses in British Columbian Jonathan Apples. It was noted that, in general, breakdown was more severe in "Extra Fancy" than in lower grade fruit, and in large than in small Apples. There was considerable difference in the extent of breakdown in the fruit from the various packing exchanges; this is a matter which might usefully be further investigated in Canada.

(5) An experimental shipment was carried out in cooperation with the Summerland Experimental Station to test under commercial conditions the efficacy of early harvesting as a method of controlling breakdown. Satisfactory control of the disease was obtained in the early-harvested fruit; most of the later picked samples developed breakdown to a greater or less extent. Apples from lightly laden trees proved more susceptible than Apples from trees bearing a heavy crop.

(6) Fairly extensive bitter pit was observed in British Columbian Cox's Orange Pippins, and the disease was also noted, though to a less extent, in several other varieties from all provinces. It appears from investigations on Australian fruit, that Apples picked before reaching full maturity are particularly susceptible to the disease; delayed harvesting may, therefore, be expected to provide some measure of control.

Pears.

(7) Only Pears from Ontario were examined in quantity; a few consignments were over-ripe, but the majority arrived in sound condition. The method of packing in boxes and trays was generally satisfactory; packing in barrels appeared less suitable on account of the relative softness of the fruit and its liability to injury when mature.

Plums.

(8) Most consignments of Plums were fairly free from wastage on arrival, but often deteriorated rapidly after removal from refrigeration. Brown rot was the most serious type of wastage and more effective control of this disease is essential for the successful export of Canadian Plums.

(9) Considerable losses also occurred in some varieties, notably Burbank, through a type of physiological breakdown, and it is suggested that experiments should be undertaken in Canada to determine whether this can be controlled by suitable harvesting and storage procedure.

(10) In some instances the Plums failed to attain satisfactory eating quality, even when fully ripened, and it appeared probable that they had been picked at too early a stage of maturity.

(11) Pre-cooling and rapid shipment at carefully controlled temperatures are desirable, more particularly if later picking is found to be necessary.

(12) It is recommended that the fruits should always be individually wrapped in paper, unless their small size renders this impracticable.

Peaches.

(13) Most consignments of Peaches were firm, slightly unripe and in sound condition when first discharged; but samples retained under observation did not become sufficiently ripe for consumption till some time after removal from the ship's cool store, when fairly extensive wastage had developed. Wastage was mainly due to brown rot.

(14) The packing was generally satisfactory, but a few Peaches were slightly bruised by adjacent fruits. This could be avoided by placing a layer of wood wool between the individual Peaches.

BRITAIN REJECTS AMERICAN LOW-GRADE APPLES.

Importation of Raw Apples Order of 1930.

In order to prevent the introduction of the Apple fruit fly into England and Wales, a new order has been issued under the British Destructive Insects and Pests Act, restricting the importation into England or Wales of Apples grown in the United States of America and landed between July 7 and November 15 in each year unless accompanied by a certificate in accordance with the form set out in the schedule to that order to the effect that the fruit consists of certain recognised grades.

The effect of the order is that all the lowest grade fruit grown in the U.S.A. is prohibited importation into England and Wales during the period mentioned.

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

PATENTS
GEORGE A. U'REN
PATENT ATTORNEY
"HENTY HOUSE," 499 LITTLE COLLINS ST.
MELBOURNE.

GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle
Etc.

Special Announcement

. . by . .

Mr. H. G. Colombie

We have much pleasure in announcing that the European Organisation of Selling Brokers which I have the honor to represent in Australia, has been further strengthened by the fusion of certain interests and by the addition of other well-known firms.

Messrs. M. Isaacs & Sons Ltd., of London, have now amalgamated with Messrs. Connolly, Shaw Ltd., of Liverpool, Hull, Manchester, Cardiff, Newcastle, Dublin, and Belfast. The London business will henceforth be conducted under the title of Connolly Shaw Ltd. As is well known, Messrs. Connolly Shaw Ltd. also hold the controlling interest in Messrs. Russell, Turnbull & Co. Ltd., of Glasgow.

In addition, the well-known firm of Hamburg Brokers, Aug. Stier, has also joined our Australian branch of the Organisation, having taken over the Hamburg interests of the Algemeene Vruchten Import Maatschappy, whilst the latter firm will continue to act for the Organisation in Rotterdam, Amsterdam, and Cologne, having taken over the interest hitherto held in Holland by Aug. Stier.

The old-established firm of Bristol Brokers, Messrs. C. F. Ivens & Co., has also joined our Organisation.

There is no alteration in the other markets, the complete list being as follows:—

Messrs. Connolly, Shaw Ltd., London.
Connolly, Shaw Ltd., Liverpool.
MacGeorge & Jardine Ltd., Liverpool.
Connolly, Shaw Ltd., Hull.
Connolly, Shaw Ltd., Manchester.
Russell, Turnbull & Co. Ltd., Glasgow.
C. F. Ivens & Co., Bristol.
Connolly, Shaw Ltd., Cardiff.
Connolly, Shaw Ltd., Newcastle.
Connolly, Shaw Ltd., Dublin & Belfast.
Aug. Stier, Hamburg.
Algemeene Vruchten Import Maatschappy, Rotterdam.
Algemeene Vruchten Import Maatschappy, Amsterdam.
Algemeene Vruchten Import Maatschappy, Cologne.
Kobenhavns Frugtauktioner, Copenhagen.

This Organisation of Selling Brokers is the most comprehensive and powerful in the fruit trade in the world.

By the complete inter-relationship between the various members, and by having its own trained Resident Representative in Australia, it will be realised that this Organisation is able to give service which is better than most, and equalled by few.

AUSTRALIAN AGENTS.

I.F. & M. Co., 414 Flinders Lane, Melbourne.
Scott & Edwards, 128 King Street, Melbourne.
A. G. Lester, 410 Flinders Lane, Melbourne.
N. McLean Pty. Ltd., Western Market, Melb.
Geo. Wills & Co. Ltd., Perth.
Silbert, Sharp & Bishop Ltd., Adelaide.
Thiessen & Crowder, Sydney.
Clements & Marshall Pty. Ltd., Launceston and Hobart.
Port Huon Co-op. Co. Ltd., Hobart.

General Representative for Australia:

H. G. COLOMBIE

Temple Court - 422 Collins Street, Melbourne
Telegraphic Address: "Columbine," Melbourne. Telephone F 3284.

THE MARKETING BILL.

Virtual Rejection in Victoria.

DURING SEPTEMBER there was intense interest among Victorian fruitgrowers concerning the fate of what was known as the Primary Producers' Marketing Bill.

Designed originally to create a Marketing Board for a compulsory wheat pool, the Bill was enlarged to include all classes of primary products.

During the passage of the Bill through the Legislative Assembly there was no unusual activity observed among fruitgrowers, due largely, it is thought, to the fact that it was not realised that fruit was included. All the public emphasis at the time was on the subject of the wheat pool.

However, on the Bill being introduced into the Legislative Council, a number of fruitgrowers met, and after considering the Bill in detail, decided to strongly resist the passage of the measure.

On the other hand, it is understood many citrus growers desired the legislation, and pressed for its enactment. Many members of the Legislative Council were being pulled two ways—some of their constituents (notably dairymen and poultry keepers) desiring the Bill, and others vigorously opposing it.

However, the Bill was carried by a narrow margin at its second reading, the idea being that when the Bill was in Committee it would be vitally amended.

A Fruitgrowers' Defence Association was formed with the object of securing the deletion of the fruit industry—or rather, those particular sections desiring to be removed from the Bill's provision. For instance, if a majority of the citrus growers desired the legislation, the words in the Bill—"fruit (fresh, dried or canned)"—could have been altered to "citrus fruits."

* * * * *

What Products Were Included?

Section 4 reads:—In this Act the word "product" includes any grain, cereal, fruit (fresh, dried or canned), vegetable, live stock, meat, fish, hay, chaff, wool, eggs, poultry (live or dead), honey, beeswax, or other product of agriculture, grazing, poultry farming, beekeeping or fishery, and any dairy produce (including bacon, butter and cheese), and any other article of commerce prepared (other than by process of manufacture) from the produce of agriculture, grazing, poultry farming, beekeeping, or fishery, but does not include dried Currants, dried Sultanas, or dried Lexias.

However, when the Bill reached the Committee stage a vital amendment was moved—to delete the words "any grain, cereal." This was regarded as a test amendment to decide the fate of the Bill, and as the amendment was carried, the debate was immediately adjourned.

As we go to press the Bill is still in the Committee stage, and is subject to amendments.

Should the Bill be dropped or should the fruit industry be excluded, it would appear that those sections of the fruit industry desiring this class of legislation will set about preparing a Bill designed for their special needs.

Some of the principal objections urged against the Primary Products Marketing Bill were:—

(1) That the fruit industry (speaking broadly) had not asked for the legislation. (2) It was designed for wheat marketing, and as such contained many provisions totally unsuited to the fruit industry. (3) Very large powers were vested in the "Governor-in-Council" to make regulations, the breaking of which carried heavy penalties.

Section 15 stated that the fruit (or other commodity) should be divested from the producers and be vested in and be the absolute property of the Board as the owner thereof—free of mortgages, liens, contracts, etc.: persons having any such claims were referred to the Board.

The Marketing Board assumed power to sell or arrange for the sale of all fruit in or outside Victoria (whether the fruit was produced in Victoria or elsewhere). If attempting to sell his own fruit without the Board's authority the grower was liable to a penalty of £100. The railways or any other common carrier could, on the request of the Board, without incurring liability, refuse to carry any of the fruit from any place in Victoria to any place in Victoria.

* * * * *

Large meetings of protest were held in Victorian fruitgrowing districts, and resolutions were unanimously adopted requesting the deletion of the fruit industry from the Bill.

* * * * *

During the debate on the Marketing Bill a poll of wheatgrowers was taken. Only 65 per cent. of votes were returned; of that number, only 54 per cent. were in favor of the compulsory pool. This being 6 per cent. below the statutory requirements, the compulsory pool was defeated.

* * * * *

In the meantime, as above stated, wheat has been deleted from the provisions of the Bill.

* * * * *

It is generally accepted that the amendment deleting wheat and cereals was fatal to the Bill.

TREES

Goodman's the best—proved all over Australia. All varieties in Fruit Trees, Ornamentals, etc. Reliable healthy Trees, free from insect pests. Full information, Catalogue, etc., free.

Write to-day.

GOODMAN'S NURSERIES

P.O. Box 47. BAIRNSDALE, VIC.

(W. McF.)

COOL STORAGE IN N.S.W.

THE following returns compiled by the N.S.W. State Marketing Bureau show respectively the quantities of fruit reported to be held in cool stores in New South Wales at September 13, 1930, and September 20, 1930, together with the quantities placed in and withdrawn from cool storage during the intervening period:—

	Fruit.				
Particulars.	Apples.	Pears.	Other fruit (not Apples or Pears).	Other fruit (no indication of varieties).	Total (all varieties).
	bush.	bush.	bush.	bush.	bush.
Balance in storage from week ended 13/9/30 ..	30,232	477	143	14,200 (a)	28,052
Placed in storage during week ended 20/9/30 ..	87	16	172	not known	275
Totals	13,319	493	315	14,200	28,327
Withdrawn during week ended 20/9/30	1,467	31	76	200 (b)	1,774
Balance in storage on 20/9/30	11,852	462	239	14,000 (a)	26,553

Notes.—Column headed "Other fruit (no indication of varieties)" relates to a weekly statement limited to the total quantity of all fruits (varieties unnamed) in storage on Saturday.

(a) Disclosed information.
(b) Arrived at by deduction.

Happiness has no tailor. It belongs to the soul; and a black coat or a blouse is of no matter to it.

* * *

Happiness belongs to those who are contented.—Aristotle.

Keep your face with sunshine lit,
Laugh a little bit,
Gloomy shadows oft will flit,
If you have the wit and grit,
Just to laugh a little bit.

3 lbs. per Tree Costing 7 Pence
of
NITROPHOSKA

Contains Approx. the Same Amount of Plant Food as
1¾ lbs. Sulphate of Ammonia.
¾ ,, Nitrate of Soda.
2¼ ,, Superphosphate.
1¼ ,, Muriate of Potash.

Three Pounds Does the Work of Six ! ! And costs no more
If you agree with us that the above is a very suitable mixture for a SPRING APPLICATION to your trees, THEN
Don't Delay——It's Getting Late
NOTE.—If you cannot afford 7 pence per tree, then 2 lbs of Nitrophoska costing about 4½ pence is still a good dressing
Stocks immediately available from YOUR PACKING SHED, or LOCAL AGENT, or write to us
Henry H. York & Co. Pty. Ltd., 573-585 Lonsdale St., Melb.
(Late Dyes & Chemicals (Aust.) Ltd.)
Sole Distributors.
Write for Pamphlet.

If you cannot afford to Manure much this Year—

Don't Omit Nitrogen

What SUPER is to the WHEAT Crop
NITROGEN is to the FRUIT TREE

By Choosing one of the following you get a little Lime for Nothing:—

CALNITRO.	
Ammonia Nitrogen	10.5%
Nitrate	10.5%
Carbonate of Lime	35.0%

£14/10/- per Ton, F.O.R., Melbourne.

NITRATE OF LIME.	
Nitrate Nitrogen	15.0%
Ammonia	0.5%
Carbonate of Lime (equiv.)	5.0%

£13/10/- per Ton, F.O.R., Melbourne.

Stocks immediately available from YOUR PACKING SHED, or LOCAL AGENT, or write to us

Henry H. York & Co. Pty. Ltd. 573-585 Lonsdale St., Melb.
(Late Dyes & Chemical (Aust.) Ltd.)
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Write for Pamphlet

Actual Proof of the True Worth of "VALLO" Sprays

Here are two of the many letters which we receive by every mail:—

Mr. W. Ireland, writing from Mitcham, says: "Having used your "Vallo" Prepared White Oil during the past season, I cannot speak too highly of it as a spray on Lemons for the Scale. It also makes a splendid spreader mixed with Arsenate of Lead for Codlin Moth."

Mr. W. G. C. Roberts writes: "You will no doubt be pleased to know I have used "Vallo" "Home-Made" Bordeaux 6-4-40 and 4-4-40 mixtures for the last two seasons, and find it entirely satisfactory.

"The last season has been one of the worst on record for Black Spot in this district, but notwithstanding these adverse conditions, I am pleased to say I had an excellent Apple crop.

"A considerable quantity of my fruit was exported this season, and the Government Inspector informed me on several occasions that my Apples were the best forwarded from Red Hill."

These "Vallo" Sprays have proved indispensable for use during the winter months—Lime Sulphur Wash—noted for its fungicidal and insecticidal qualities and used extensively as a winter spray for Apples and Pears. "Vallo" Prepared Red Spraying Oil has sure control of all Scale and Insect Pests. "Vallo" Prepared White Oil kills by contact all kinds of scale insects.

It is impossible to mention every "Vallo" Spray, but we will be glad to send you, free on request a descriptive booklet which gives full particulars. This valuable information will be of vital interest to anyone whose aim is to ensure an orchard free from destructive insects and fungus diseases, and a fruit yield free from blemish.

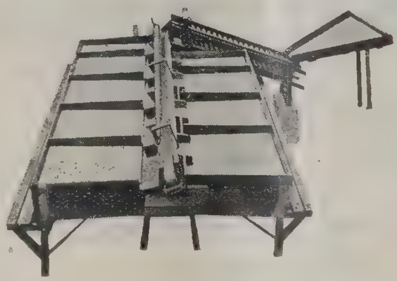
V VALLO

VICTOR LEGGO & FARMERS LTD.
218-222 Queen St. Melbourne
SYDNEY AGENTS IN ALL STATES BRISBANE

"To Choose the Best is Wisdom"

BETTER PRICES—

CAN THEY BE OBTAINED FOR FRUIT?



Three Quality—Model 17.

By the use of **Organized Packing Methods and Proper Facilities** the value of the fruit is **increased** and costs reduced. **Fruit well graded** and **properly packed attracts the right class of buyer.** Special efforts for the coming season will be well worth while and their success will depend greatly on the facilities used.

"Lightning" Equipment is Specially Designed to help you obtain MAXIMUM RESULTS at a MINIMUM COST.

Our Catalogue, No. 7, has just been issued, and shows Models specially designed to help you with your marketing problems. We will be pleased to post you a copy.

Note Our New Address:

The "Lightning" Fruit Grader Co.

517 Albion Street, West Brunswick, N. 12. Melbourne, Vic.

FRUIT FOR EXPORT.

Messrs. C. J. Parnham (Parnham Pty. Ltd.), and J. W. Barker (Barker, Green & Parke), returned to Melbourne per s.s. "Naldera," at the end of September. They state that our ideas regarding the export of fruit to Europe need immediate revision. Our standard must be raised and our distributing methods improved before we can obtain the best returns. West Australian, Victorian, and South Australian Apples were reasonably uniform in standard, and were well regarded by European merchants, but some Tasmanian Apples were unsuitable for export. It would be profitable for Australian exporters to concentrate upon 10 or 12 popular varieties.

U.S. Spray Expert Coming.

Messrs. H. C. Pannifex & Co. are in receipt of a cable advising that Mr. L. R. Gardner (of the research staff of the California Spray Chemical Co.) is on his way to Australia, and no doubt his advice will be available to growers generally. It will be remembered that Mr. D. D. Penny, of the same company, spent some months in Australia three years ago, and Mr. Gardner hopes to continue the work of his predecessor.

BRITISH CANNED FRUITS.

Important developments are taking place in the British canned fruits industry, which has already grown in five years from practically nothing to an output of 50,000,000 tins this year.

Capital is about to be spent in providing factories almost at the growers' doors, wherever fruit and vegetables are available in sufficient quantities.

ROYAL COMMISSION IN TASMANIA.

Mr. Justice Clark and Mr. C. E. H. Ferguson are sitting as a Royal Commission on the Fruit Industry in Tasmania.

The various interests concerned are represented by counsel.

Voluminous evidence has been tendered, the various witnesses having spoken on the matters in which they are interested. Witnesses have been cross-examined by counsel.

The fruit export industry in its varied phases is being closely examined: the enquiry has roused great interest throughout the State, and the report of the investigators will be eagerly awaited.

It is hoped that as a result of this enquiry the Tasmanian fruit industry will be placed on a better basis.

Classified Advertisements.

HARVEY ONE-WAY DISC CULTIVATOR, good order, half drill, new; would exchange for Harvey 2-F. Disc Plough. **Box 9, Horsham.**

Orchard Hand, all-round, wants job, any district. First-class references, good packer, good mechanic. Take charge if required. **"L.B.," Fruit World Office.**

AUSTRALIAN FRUIT ABROAD.

SOME INTERESTING COMMENTS regarding Australian fruit export have been made by Mr. H. G. Colombie, President of the Victorian Fruit Marketing Association, who has just returned from a visit to England and the Continent. While abroad Mr. Colombie visited London, Glasgow, Bristol, Liverpool, Manchester, Hull, Cardiff, Hamburg, Rotterdam, Copenhagen and Amsterdam.

Early in the season he corrected a widespread idea that excessive quantities were coming from Australia and that low prices would rule. Until about early or mid-June prices realised were fairly satisfactory. After the middle of June the markets began to break, due firstly to the large quantities then arriving, mostly from Tasmania and New Zealand. These heavy arrivals clashed with an abundance of Cherries and Strawberries in England and the Continent.

Further, some Tasmanian steamers loaded too large a quantity, this having an adverse psychlogical effect on buyers even though the quantity was divided between various ports. One steamer had 200,000 packages, the further mistake being the sending in the same vessel very large quantities both to Manchester and Liverpool, in addition to a large supply to London. It is an axiom in the fruit trade, states Mr. Colombie, which has not yet been assimilated in Australia, that a vessel taking fruit to Manchester should not also carry fruit to Liverpool or vice versa.

In the case of New Zealand, a large proportion arrived later than usual. Much of the fruit was cool-stored in various directions, which had a further psychological effect on dealers who never knew when this extra fruit would be released.

Organisation in Australia.—The Fruit Marketing organisations in Victoria and South Australia should serve a useful purpose in regulating and co-ordinating shipping programmes. It is hoped that the Marketing Asosciations formed in Victoria and South Australia will give the lead to the formation of similar organisations in the other States. In fact, there is no reason why effective contact should not be made with New Zealand as well.

Mr. Colombie expresses the view that although more Australian fruit is going through the brokers, there are still, especially in the case of London, too many individual receivers, thus decreasing the trade buying competition. Mr. Colombie returned via Canada and the United States, where he noted many matters of interest to growers.

Before you Finalise
Your spraying programme for 1930/31
CONSIDER the time and labor-saving
advantages of dusting for EFFECTIVE
PEST CONTROL

EFFECTIVE G.B DUSTS

Complete Dusting Schedule
Posted Free on
Application.

Niagara Dusters
The best of
ALL

GIBBS. BRIGHT & CO
27 Grenfell St.
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ONE MAN CAN DUST
60 TREES
per hour with the
Niagara
Hand Duster Gun

A thorough and effective
film of protection against
disease and insect attack
with the Niagara Power
Duster.

SEE THEM AT OUR AGENTS STORES
OR ASK FOR A FREE DEMONSTRATION.
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The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,
Advertising in this Journal.

NEW SOUTH WALES.
Sydney:
Chilton, F., City Fruit Markets.

VICTORIA.
Melbourne:
Andrew, Fred. J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
Silbert, Sharp & Davies, Western Market.
Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.
Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.
Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.
Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.
Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.
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Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd.
The White Service.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.
Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.
Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers.
Johnson, T. S., & Co.
Bristol and Southampton:
Bristol Fruit Brokers Ltd.
Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.
Glasgow:
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FRANCE.
Scheiber, E., Paris.

GERMANY.
Bremen:
Fruchthandel, Gesellschaft.
Hamburg:
Algemeene Vruchten, Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.
Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.
Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

GREAT BRITAIN.

London, 21/8/30 (Covent Garden).—The "Fruit, Flower & Vegetable Trades' Journal" reports prices or follows:—Apples, N.Z. Rokewood and Sturmer, 9/- to 11/-; Statesman, 10/- to 12/-; Dougherty, 9/- to 12/-; Tas. Sturmer, 7/- to 9/-. Grapefruit, S. Af., 16/- to 20/-; Porto Rico, 35/- to 40/-. Lemons, Naples, 12/- to 20/- case. Oranges, Brazilian, 14/- to 20/- case; S. Af. navel, 13/- to 20/-; seedling, 11/- to 18/- case. Pears, Cal. Bartlett, 22/- to 23/- case; B. Hardy, 23/- to 25/-.

London Fruit Exchange, Spitalfields, August 15.—Oranges, S. Af. navels, 96-126's, choice 12/- to 14/-, standard 10/6 to 12/6; 150-176's, 14/- to 16/-, and 13/6 to 15/-; 200-252's, 16/- to 17/6 and 15/- to 17/-. Apples, Cal. boxes Arkansas Black, 216's, 9/9; Winesap, 216's, 9/3; Vict., boxes, Rokewood, 7/6 to 8/3; Yates, 5/- to 5/6; Romes, 5/6 to 5/9; Rymer, 5/6 to 6/-. Pears, Cal., boxes, Bartlett, 20/- to 21/-. Lemons, Sicilian, cases, 13/- to 27/-; boxes, 300's, 10/6 to 24/-.

Glasgow, August 21.—Pears, Cal. Bartlett, 18/- to 24/- case; B. Hardy, 25/6 to 26/6. Apples, Grav., 10/6 to 11/6. Lemons, Messina, 300's, 14/-, 16/- and 18/-. Oranges, navel, 15/-, 17/- and 19/-; seedlings, 14/-, 16/- and 18/-.

Manchester (July 30).—S. Af. Oranges, seedlings, sound, 96's, 12/- to 13/-; 112's, 14/- to 15/-; 150's, 17/-; 176's, 19/- to 21/-; navels, 96's, 14/- to 16/-; 112's, 16/- to 17/-; 150's, 19/ -;176's, 22/- to 23/-; 200-226's, 24/-; Valencia Oranges, 240's, 17/- to 22/-; 300's, 19/- to 23/-; 360's, 18/- to 20/-; 504's, 18/- to 23/-. Apples, Aust. Cleo., 9/- to 11/-; Jon., 11/- to 13/-; Sturmer, 7/- to 9/6; N.Z. Rokewood, 10/- to 11/-; Rome, 9/- to 11/-.

Hull (July 30).—S. Af. Oranges, sounds, navel, 150, 15/3 to 16/-; 176's, 16/6 to 17/9. Tas. Apples, boxes, Sturmer, 6/- to 7/6; French Crab, 6/3 to 7/-; Scarlet Nonp., 5/3 to 6/-; Scarlet Pearmain, 6/- to 7/6.

Liverpool (August 20).—Apples, Tas. Sturmer, 5/- to 8/- case; Cleo., 8/- to 10/-; Cal. Gravenstein, 11/6 to 12/- per box. Oranges, S. Af., 150's, 15/- to 16/- per box; 176's, 16/- to 17/-; 200-216-252's,. 18/- to 19/-. Lemons (Naples), 20/- to 25/- per case. Grapefruit (Californian), 23/- to 24/- per case.

NEW SOUTH WALES.

Sydney, 24/9/30.—Mr. F. Chilton, City Fruit Markets, Sydney, reports prices as follows:—

Queensland Fruits.—Bananas, 14/- to 24/- per case; Pines (Queens), 9/- to 12/-; Papaws, 6/- to 12/-; Tomatoes, 6/- to 15/- per half-case.

New South Wales Fruits.—Bananas, 14/- to 24/- per case; Oranges, commons, 3/- to 7/- per bus., navels 6/- to 12/-; Grapefruit, 5/- to 12/-; Mandarins, 2/6 to 8/-; Lemons, 3/- to 8/-; Apples, G.S., 8/- to 15/-; Pears, Packham 8/- to 11/-, Josephine 8/- to 11/-; Passions, 5/- to 13-/- per half-case; Loquats, Mammoth, 5/- to 10/-.

Victorian Fruits.—Apples, Jon., 6/- to 10/- per bus.; Pears, Packham 7/- to 10/-, W.C. 6/- to 10/-, Jas. 8/- to 11/-, W.N. 6/- to 9/-.

Tasmanian Fruits.—Apples, Tasma (Democrat) 7/- to 11/- per bus., Crofton 5/- to 10/-, Jon. 5/- to 10/-, S.P.M. 5/- to 10/-, F.C. 6/- to 10/-; Pears, W. Cole, 7/- to 10/-.

South Australian Fruits.—Navels, 8/- to 15/- per bus. case.

The demand generally is moderate, and in view of the prevailing depression high prices are not likely this season. An improvement in values of citrus fruits is expected when warmer weather definitely sets in.

QUEENSLAND.

Brisbane (September 20).—Tas. G.M. Pears, 9/- to 10/- per case; Vic. W.N. Pears, 6/- to 13/-; Valencia Oranges, 8/- to 9/-; others, 5/- to 7/-; small, 4/6 to 5/-; navels, 9/- to 12/-. Mandarins, Glens, special 15/- to 18/-, small 7/- to 9/-; Emperors, 8/- to 12/-; Scarlets, 10/- to 13/-; Waratahs and Excelsior, 10/ to 12/-; Feutrels, 5/- to 7/-; Kings, 8/- to 12/-. Grapefruit, 3/- to 4/-. Local Lemons, 2/- to 4/-.

Apples.—Vic. Jon. 2½in. 13/- to 14/- case, 2¼in. 11/- to 12/6, 2⅛in. 9/- to 11/-; R.B. 9/- to 12/-; Rokes, 10/- to 13/-; Yates, 13/- to 15/-. Tas. Demo., 13/- to 14/-; F.C., 12/- to 13/-; S.P.M., 12/- to 13/-; N.Y.P., 12/- to 13/-; S.T.P., 10/- to 12/-; Jons., 13/- to 14/-; Croftons, 12/- to 13/-; small size Apples, 7/- to 9/-. Passion Fruit, 4/- to 9/-.

Custard Apples, 2/6 to 4/- case. Papaws, Yarwon, 8/-; local, special colored, 5/- to 7/- case; green, 1/- to 2/6 per dump. Pineapples, smooth leaf, 5/- to 7/6 per case.

SOUTH AUSTRALIA

Adelaide (September 27).—Tomatoes, 12/- to 15/- per half case. Apples (eating), 6/- to 7/- per case; (cooking), 4/- to 5/-. Lemons, 9/- to 10/-. Oranges (common) 6/-; do. (blood), 7/-; do. (Mandarin), 9/- to 10/- case; do. (navel), 9/- to 11/-; do. (poorman), 6/- to 8/-. Passion Fruit, 18/- half case. Pears (eating) 4/- to 5/- case; do. (cooking) 3/- case. Pineapples, 14/- to 16/- case.

WEST AUSTRALIA.

Perth (September 20).—Apples.—Dunn's, dumps, 8/- to 11/6; Romes, 5/6 to 10/6; Yates, 10/- to 14/6 (inferior from 7/-); G. Smith, 9/- to 15/-; Cleos., 7/6 to 10/6; Doherty, 8/- to 11/- (inferior from 5/-); other varieties, 6/- to 13/-. Citrus.—Navels, flats, 6/- to 11/- (inferior from 3/-), dumps 6/6 to 14/- (inferior from 3/-); Oranges, plain, flats 3/- to 7/6, dumps 6/6 to 11/- (inferior from 2/6). Lemons, flats, 2/6 to 6/6. Mandarins, flats, 5/- to 9/- (inferior from 2/6).

VICTORIA.

Melbourne (30/9/30).—The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market yesterday for average quality fruit:—Apples: Good to choice eating, 3/6 to 8/-; cooking, 4/- to 7/-. Bananas: Green Queensland, special and choice, 20/- to 22/-; odd lots higher; standard, 15/- to 19/-; plains, 10/- to 14/- per double case; rust-affected lines lower. Lemons, 4/- to 6/-; few special higher. Mandarins: Milduras, to 7/-; N.S.W., 3/- to 5/-. Oranges: Common, bulk, 4/- to 5/-; Mildura, 5/- to 6/-; few specials, higher per case; navel Oranges, 4/6 to 7/-; few specials higher. Papaws, 10/- to 14/- per double case. Pineapples: Queens, 8/- to 10/-; a few to 11/- per double case. Weaker demand for large counts. Passion fruit, best quality, to 26/- per case, poor quality difficult of sale. Heavy supplies of citrus fruits continue to arrive, and stocks are not clearing. The bulk of the fruit is arriving in a "specky" condition.

The Melbourne manager of the Federal Citrus Council of Australia reports that sales were as follow:—Average standard shed pack navel Oranges, 5/- to 7/-, odd sales to 8/-; faulty packs lower; specials, higher; common Oranges, 4/- to 6/-; a few Milduras to 7/-. Mandarins, 3/- to 6/-; few odd lines higher. Lemons: Medium sizes, 180-248, to 9/-; a few specials higher; small, marked or large, from 5/-. Grapefruit, average standard grade, 6/- to 9/-; a few selected lines, 14/- to 18/-; some higher. Poormans, few to 8/-; Sevilles, medium sizes, few to 8/-; small, counts 126, almost unsaleable.

NEW ZEALAND.

Dunedin (18/9/30).—Reilly's Central Mart report prices as follows:—Apples, Del. 10/- to 12/6, small 6/- to 8/-; Jons., 8/- to 10/-; other desserts, 6/-; Sturmers, 8/- to 11/-, cooking 6/- to 8/6. Pears, half-cases, W.N. 6/6, cooking 9/-. Navels, N.S.W., 18/- to 22/-; Victorian, 22/-. Mission Lemons, 55/-; Australian, 15/- to 18/-; N.Z., 8/- to 10/-. Sevilles, Australian, 15/-. Poorman Oranges, 9/-. Australian Passions, 22/-; "Socro," N.Z., 12/6. Pineapples, choice Queens, to 22/6. Bananas, ripe, 30/-.

Protection for Orchards Against Insect Pests.

Many successful orchardists speak highly of "Vallo" sprays for their efficiency in ridding orchards and keeping them free from all types of insect pests. Among these well-known sprays are "Vallo" nicotine sulphate, which destroys aphis, thrips and sucking insects; "Vallo" prepared white oil, for controlling codlin moth and all scale insects; and "Vallo" arsenate of lead, which has suspension and adhesive qualities, which stick the sprays to the fruit and foliage. Further information is contained in an attractive booklet which will be forwarded free on request from Messrs. Victor Leggo and Farmers Ltd., 218-222 Queen-street, Melbourne.

Unbreakable Glass Substitute
"WINDOLITE"

which admits the health-giving Ultra-violet Rays (ordinary glass does not). Of immense value to gardeners and others for seed frames, ferneries, glass houses, handlights, bloom and plant protectors. Keeps out frost and cold biting winds; admits the sunshine and the **growth promoting** rays; prevents scorching and drawing of plants.

Use **Windolite** for verandahs and sleep-outs, in factories, for poultry pens and brooders, and wherever glass gets easily broken. Light, flexible, easy to cut and fix. Stocked by Jas. McEwan & Co. Pty. Ltd., D. & W. Chandler Ltd. (and at Fitzroy); Myer Emporium Ltd.

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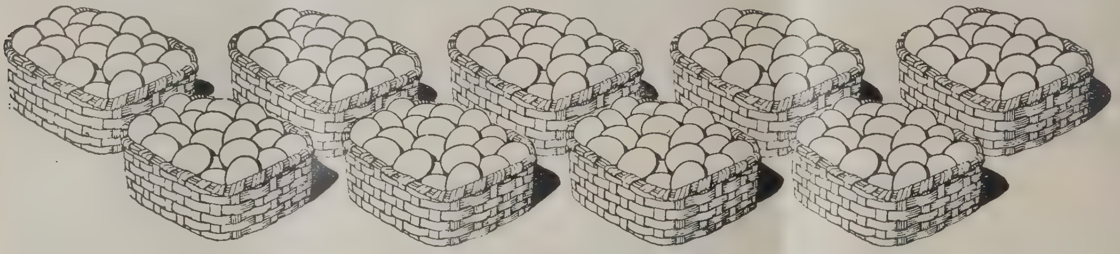
Australian Agents: **C. H. Leaver & Co., 524 Collins St., Melbourne.** Send for sample.

Karswood

means Increased EGG Production



With almost monotonous regularity, the leading men in the public life of the country keep telling us that half our troubles would be solved if we only produced more. "Produce—produce—produce," is their exhortation, and there is a very sound reason behind it. For greater production means reduced costs of production, and it is only by reducing the costs of production that Australia will be able to compete in oversea markets.

And the production of eggs is no exception. If you obtain a greatly increased number of eggs for an infinitesimal increase in cost, you have reduced your costs of production, and are thus better able to meet a fall in price if it occurs. And if prices are up, then it is so much extra in your pocket. Karswood Poultry Spice increases egg production to an amazing degree, but it obtains its results in a perfectly natural manner. It does not force, because it contains no forcing ingredients, but gently coaxes the birds to more active laying. A half-pound packet, costing 1/–, supplies 20 hens for 16 days.

"The Best Egg Producer on Market"

Dear Sir,

I have been a user of Karswood Poultry Spice for some years and cannot speak too highly of it both as a tonic and egg producer. I am convinced that it increases the production, especially in the winter when the weather is so changeable. I am sure Karswood is the best egg producer on the market and will always recommend it.

Yours faithfully,

(Sgd.) F. J. HARRISON, Beaconsfield,
South Fremantle, W.A.

"Wonderful Addition to Birds' Diet"

Dear Sir,

Although as yet I am only in a small way, having only a dozen W.L. pullets, I certainly do think your Spice is a wonderful addition to the birds' diet. I am getting eggs now, when no one around has them, and everyone remarks how well my birds look. Last year with only seven pullets I averaged 5 eggs daily for months which is very good, most of the birds laying 6 eggs a week, and one used to lay her 13 each fortnight for a long while.

(Sgd.) Mrs. A. W. DREW,
Briagalow, Queensland.

"The Best Egg Producer I Have Ever Used"

I have been using Karswood Spice for about two years and find it the best egg producer I have ever used. I have been getting eggs from my fowls when my neighbours' fowls are moulting when eggs were 3/6 a dozen. You can make whatever use you like of this letter as I would like others to benefit by using Karswood.

Yours faithfully,

(Sgd.) M. PHELPS, 19 Commercial Rd.,
Brighton, South Australia.

"Wonderful Help in Rearing Chicks"

Dear Sir,

I have used your Poultry Spice for nearly two years and have found it a wonderful help in rearing chicks. I gave it to my white chicks at a week old and found they matured quicker and were finer and healthier than without it. The same chicks came on to lay at 5½ months, which I consider very good and laid throughout the summer. I think this a good proof of the splendid properties of Karswood. You may use this testimonial as you think fit.

Yours faithfully,

(Sgd.) J. ELBOURN,
c/o A. Hannams Private Bag,
1/6/29 Liverpool.

A Convincing Test

I have been using Karswood Poultry Spice for the last four years. I keep about 300 Poultry, half of them free range and the other half on the intensive system. The ones on the intensive system are in five different compartments of 30 birds in each, all white Leghorns, equal in type and age. The three compartments Karswood fed, in three months average;

Jan. 601 per compartment 30 birds
Feb. 589 " " " "
Mar. 565 " " " "

Two compartments without Karswood Spice average for same period;

Jan. 397 per compartment 30 birds
Feb. 325 " " " "
Mar. 298 " " " "

A reduction of 735 eggs.

Sgd.) W. UNSWORTH, Thomas Estate,
20/5/29 Shepparton. Victoria.

Make this Test

Go to your local grocer, storekeeper, or produce dealer. Get a 1/- packet of Karswood Poultry Spice, then give it to half a dozen of your birds, in accordance with the directions on the packet. Do not expect immediate results—Karswood works naturally, not suddenly. It takes at least a fortnight to produce results, but they are good and sure.

Note the Economy

1/- packet supplies 20 hens for 16 days;
2/- packet supplies 20 hens for 32 days;
13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

6.M.30

Poultry Notes.

"UNLESS ample provision is made for the housing and yarding of layers, indifferent results will be the certain consequences, irrespective of the quality of layers that are kept," says the Acting Poultry Expert, N.S.W.

* * *

There are several systems which are suitable for adult stock, but none more satisfactory than the semi-intensive.

* * *

This system gives all the advantages that are claimed for both the free range and intensive systems.

* * *

In rainy or cold weather the flocks can be shut in the house and allowed into the runs when the weather is favorable.

* * *

Apart from the fact that the layers do better, twice the number of birds can be kept in a semi-intensive house as compared with a house of the same size under intensive conditions.

* * *

A useful size for the semi-intensive house is 22 feet long by 15 feet wide by 6 feet 6 inches high at the back and 8 feet 6 inches in the front.

* * *

This will accommodate 150 layers.

* * *

The yard space that is required is at least two square chains, and each yard should not be less than one chain wide.

* * *

It is undesirable to build a very long house and partition it into three or more houses, which necessitates the erecting of long narrow runs, because the end of each yard near the house will become quickly fouled, whereas the other portion is scarcely utilised by them.

* * *

Unless ample scratching material is provided in the semi-intensive house the real advantage of the principle is not gained.

* * *

There is no purpose in having extra width in the house except to fit it up with scratching quarters in order that the birds can be kept in the houses when occasion arises.

* * *

The house with roosting room only is also satisfactory, provided that extra yard space is given.

* * *

For 150 layers a house 30 feet long by 7 feet wide by 6 feet high at back and 7 feet in front is required.

* * *

The same building could easily be converted into a semi-intensive house if ever desired.

* * *

The yard space required is approximately 100 square feet per bird, or a yard 100 feet by 150 feet for 150 layers.

It may be necessary to alter the width and length according to the state of land available, but in any case each run should not be less than one chain wide.

* * *

All houses for layers should face the north, and it is preferable that the runs should be on the northern side of the house, to give them some protection from southerly winds.

* * *

There is no objection whatsoever to the building of double houses with a wooden or iron partition if the runs are allowed to extend beyond the ends of the building to give the necessary width.

* * *

The principle of grouping the various buildings in order to centralise the work is unsound.

* * *

A congested farm is doomed to failure.

Mopey B.O. Pullets.

Question:

"V.M." (Queenstown, Tas.) writes:—

I have been worried for some time over one pen of six Black Orpington pullets, now ten months old, that are of no use. They were bred from prize stock and should have been laying for months. I get about one egg a day, and that a soft shell one. They had body lice, but were attended to, and for over a month no sign of any more. They are mopey, appetite varies, never scratch, and sometimes their droppings a whitish color, which clings to their feathers at the back and looks like dried lime. A peculiar odor about the pen, although kept spotless and continually supplied with fresh straw.

They have shell grit and other grit, charcoal, dust bath, everything possible. They look whitish round the eye and head. They certainly have pulled down my percentage of eggs. They are valuable fowls, and I thought I would write to you first for advice to see if they should be kept. I had them where they could go for a run, but nothing would make them go out. They are not overfed; I know their rations well."

Answer:

Your pullets appear to be suffering from Cloacitis or Vent-Gleet in an advanced form. The birds should be isolated. Administer 30 grains of Epsom salts and dust the sore places about the vent with iodoform or aristol.

The complaint is an offensive one, and it is generally preferable to destroy the affected birds at once. Disinfect pens and yards. If the pullets have been properly fed and reared, it would appear that they have also inherited some constitutional weakness, as at ten months they should be in full lay.

General debility and diarrhoea, point to the possibility of tuberculosis, but it would be impossible to say definitely without a post-mortem examination. Round worms will sometimes cause birds to become mopey, and I would suggest that you treat the birds with Nema worm capsules and give the flock Epsom salts or Merval in the drinking water twice weekly.

EXPORT OF ORANGES.

Danger to Other Cargo.

The Citrus Associations have decided not to send Oranges to England this season, even though the conditions are favorable. The shipping companies have informed the Associations that no space can be made available for Oranges, as there was a danger that they would taint butter and other produce. The Government has been asked to investigate the problem.

M. ASVARISCH

FRUIT BROKER

Copenhagen - Denmark

Consignments Received. Jorks Passage.
Telegraphic Address: Asvarisch, Copenhagen.

Inquiries for Victoria and South Australia.
to
J. B. MILLS & CO.
528 Collins Street, Melbourne

CLENSEL
Insecticide and Fungicide
(British Product)

"There is another very important point which we cannot emphasise too strongly, and this refers very specially to trees and bushes.

The great secret is not to wait until the pests make their appearance, but to spray the plants, trees or bushes with a dilute solution of

CONCENTRATED CLENSEL INSECTICIDE

and water; anything from a 1 per cent. to a 6 per cent. solution, while the pests are invisible and in the larvae stage, and this spraying process should then be repeated at intervals of round about 2—3 weeks throughout the season. For years many growers were averse to adopting this procedure, but many have told us that the actual cost of this is many times wiped out by the increased production which they receive, coupled with the fact that their Gardens and Orchards are in perfect condition which represents thoroughly sound capital."

Also copy of letter from Sheehan Bros., Red Hill, mentioning that Harcourt have had the same success with Clensel.

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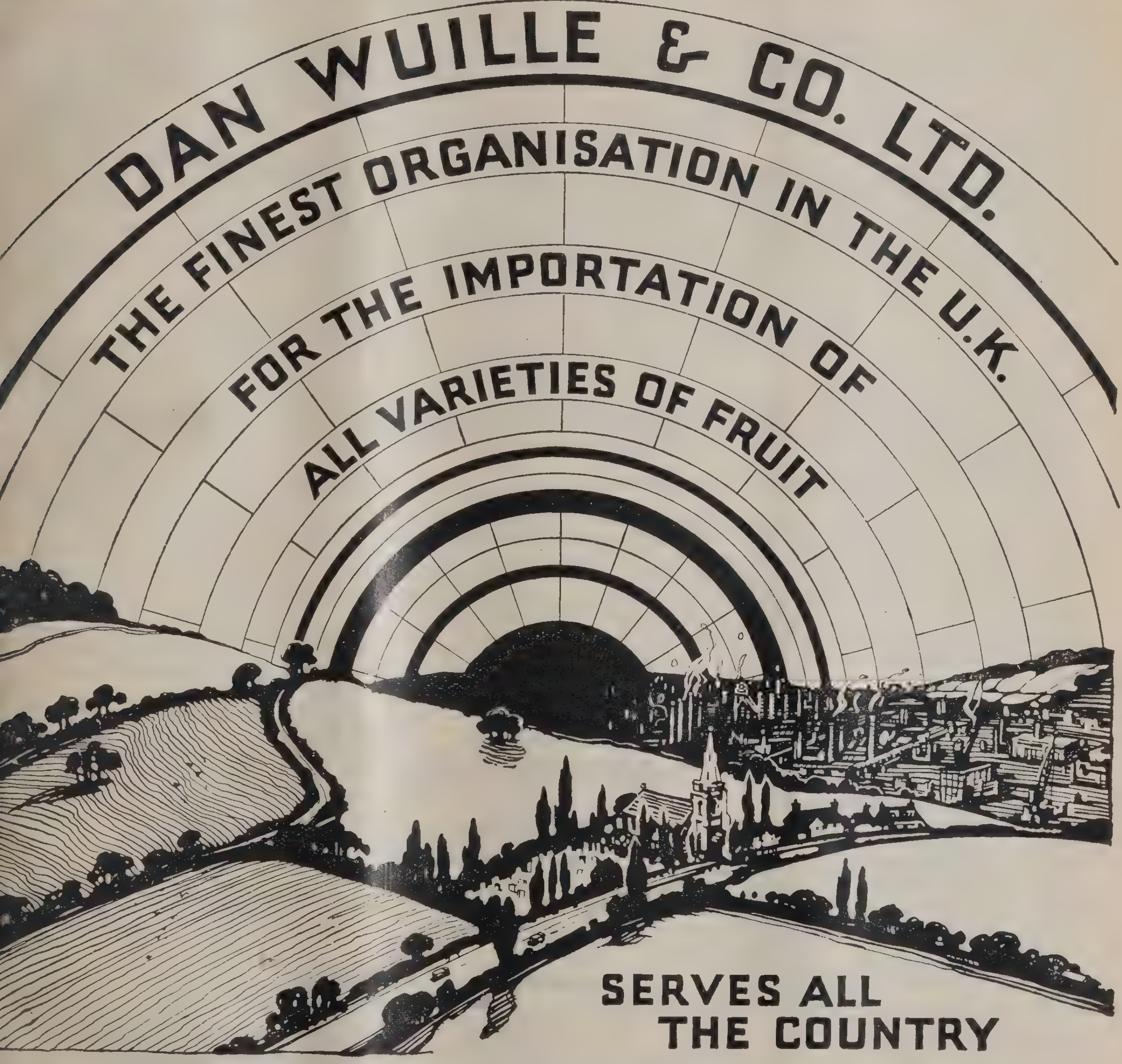
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NEWCASTLE-ON-TYNE	11-13 Clayton Street
BRISTOL	29 Queen Charlotte Street
BIRMINGHAM	Smithfield Market
LEEDS	41 George Street, Kirkgate Market

Enquiries to **J. G. MUMFORD,** Sole Agent for Victoria

35 Wholesale Fruit Section, Victoria Markets, Melb. and Registered Offices, 449-451 Flinders St., Melb., C.1.

Consignments requested for all Ports.

VEGETABLE CULTURE.

(By "Syringa.")

Root Crops Should be Sown Now.

THE PRINCIPAL SOWINGS of all root crops are made now, and by doing so, a sufficient quantity may be grown to ensure supplies throughout the year.

Carrots and **Parsnips** are always required, and full use should be made of this seasonable month by making large sowings.

Sow the long varieties of **Beetroot**, as they are such splendid keepers, and good Beet may be had for use right through next winter. The Turnip-rooted varieties must be used when they reach maturity, as they are not good keepers. They can be sown now, but when sown later, will practically only make tops, and therefore the long varieties are a better proposition for the amateur gardener to sow now if he aims for a constant supply.

Sow **Turnips** in an open spot for a summer crop. As quick growth is essential, keep the ground well cultivated, manured and watered.

Radishes grow quickly and do not take up much space. Make successive sowings once a fortnight and thin out when large enough to 2 inches apart. If kept free from weeds and cultivated, they can be had ready for use in 3 to 4 weeks from sowing.

Make Open Ground Sowings of Melons, Pumpkins, Marrows, Etc.

THIS CLASS OF VEGETABLE can be safely grown in the open ground this month. **Pumpkins** and **Squashes** especially should be sown early, as the longer growing period they have the better they will fruit, and also keep. The **Custard Squash** is a most desirable variety. It does not take up much room in the ground; it bears well, and the fruits are a nice size, just enough for a meal for a small family. The flavor is delicate and delicious.

The varieties of **Watermelons** most suitable for the amateur, especially around Melbourne, are **Black Spanish**, **Hungarian Honey**, which is small, and **Early Russian**.

Sure croppers of **Rock Melons** are **Rocky Ford**, and **Early Hackensack**, both green-fleshed varieties.

With **Cucumbers**, it is certainly worth while including a few of the **Apple-shaped** variety. It comes on very quickly and is most prolific. It is very tender and sweet, and much more digestible than the ordinary sorts. The essentials for good **Cucumber** growing are heat, moisture, and ample manure.

Recommendable **Marrows** to sow are **Long White** or **Green Bush** in metropolitan area, and **Long White** or **Green Trailing** in country districts.

Other Sowings.

Make large sowings of **Beans**, including the runner varieties, the best of which are **Epicure** and **Empire**. The sowing of Scarlet Runners should not be commenced until the end of next month.

Hanson Lettuce is a most satisfactory variety for present sowing, as it stands the heat well.

A sowing may be made of **Early Allhead Cabbage**, and towards the end of the month make a first sowing of **Celery.**

Spring Onions, also White Pearl Onions for bulbs for pickling, **Leeks**, **Spinach**, and dwarf varieties of **Peas**, can also be sown largely now.

Tomato Plants.

When planting out, see that the young Tomato plants are stocky and sturdy. They should be planted firmly, and tread the soil well around each plant. Although it is not advisable to make the ground too rich before planting, Tomatoes can stand a lot of feeding after the first fruits are set and are about half-grown. At intervals of two weeks sprinkle just a pinch of sulphate of ammonia or nitrate of soda around each plant, touching it into the soil (which should be moist) by the merest surface stirring with the hoe, then followed by water.

GLASS CLOTH
CHEAPER THAN GLASS
For POULTRY & PLANTS
USE THE ULTRA-VIOLET RAYS

3/- per sq. yard.

The name Glass Cloth is imprinted on every yard.

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Tell not the story of your life in sadness, but in joy, and let that glorious melody ring in every heart and govern every life, so that it may always be sunny and bright.—Robert Collyer.

* * * * *

This world would be a sad old place if we did not have the sweet privilege of making ourselves happy by cheering away someone else's unhappiness.

Happiness is no other than soundness and perfection of mind.

* * * * *

One sunbeam shot across a cloudy day,
Can brighten all the drear expanse of sky;
One loving smile can make a weary way
A path to paradise.

L. P. Rosen & Son, Fernhill Nurseries

Are now booking orders for all kinds of Fruit Trees, including Citrus, of which 100,000 are available, and can supply some 10,000 Valencias, grown from buds supplied by the N.S.W. Bud Selection Society. Prices and quotations on application.

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CITRUS FRUITS.

The World Production.

THE following figures in regard to the world's citrus production were recently compiled by the U.S.A. Department of Commerce.

World Production.—Oranges, 115,650,000; Lemons, 18,200,000; Grapefruit, 9,850,000. Total, 143,700,000.

United States Production.—Oranges, 35,000,000; Lemons, 6,000,000; Grapefruit, 9,300,000. Total, 50,300,000.

By Countries, and Varieties:—

Oranges: Spain, 37,000,000 boxes; United States, 35,000,000; China, 10,000,000; Italy, 9,500,000; Japan 8,500,000; Australia, 3,000,000; Algeria, 3,000,000; Palestine, 2,500,000; Brazil, 2,000,000; South Africa, 1,500,000; Paraguay, 1,000,000; Argentina, 500,000; Uruguay, 500,000; Greece, 500,000; Ecuador, 300,000; Syria, 250,000; Jamaica, 200,000; Cyprus, 200,000; Turkey, 200,000. Total, 115,650,000 boxes.

Lemons: Italy, 10,000,000; United States, 6,000,000; Spain, 1,500,000; Australia, 500,000; Syria, 100,000; Turkey, 100,000. Total, 18,200,000 boxes.

Grapefruit: United States, 9,300,000; Cuba, 300,000; Jamaica, 150,000; South Africa, 100,000. Total, 9,850,000 boxes.

Citrus Bud Selection.

Important Research work is being Conducted.

J. L. Provan, B.Agr.Sc., Science Field Officer, Horticultural Division, Department of Agriculture, Victoria.

THE PROCESS OF "SELECTION" is widely used in all phases of agricultural work. Cereals, sheep and cattle, poultry, vegetables and fruit have all been selected, because of some desirable feature which is useful to mankind. It is largely in this way that the domestic animals and plants have been brought to such a high state of perfection. This has not been accomplished in a few years by chance, but rather through centuries of persistent effort.

It is, however, only within the last century that the enormous significance of selection has been realised and closely studied. Prior to this period selection was practised, but it was of an unconscious nature, and had not a distinct object in view; it did, however, result in a general improvement.

In plants, through the occasional preservation of the best individuals, a gradual process of improvement has taken place, resulting in the many fine varieties of flowers and fruits. By selection, we mean the choosing and preservation of individuals which have desirable characteristics.

Selection, as applied to plants—especially herbaceous plants—may be of two kinds. The first is the selection of plants which have been raised from seed; for example, a number of apple and pear seedlings would be examined and those on which the fruit showed promise of commercial value would be preserved.

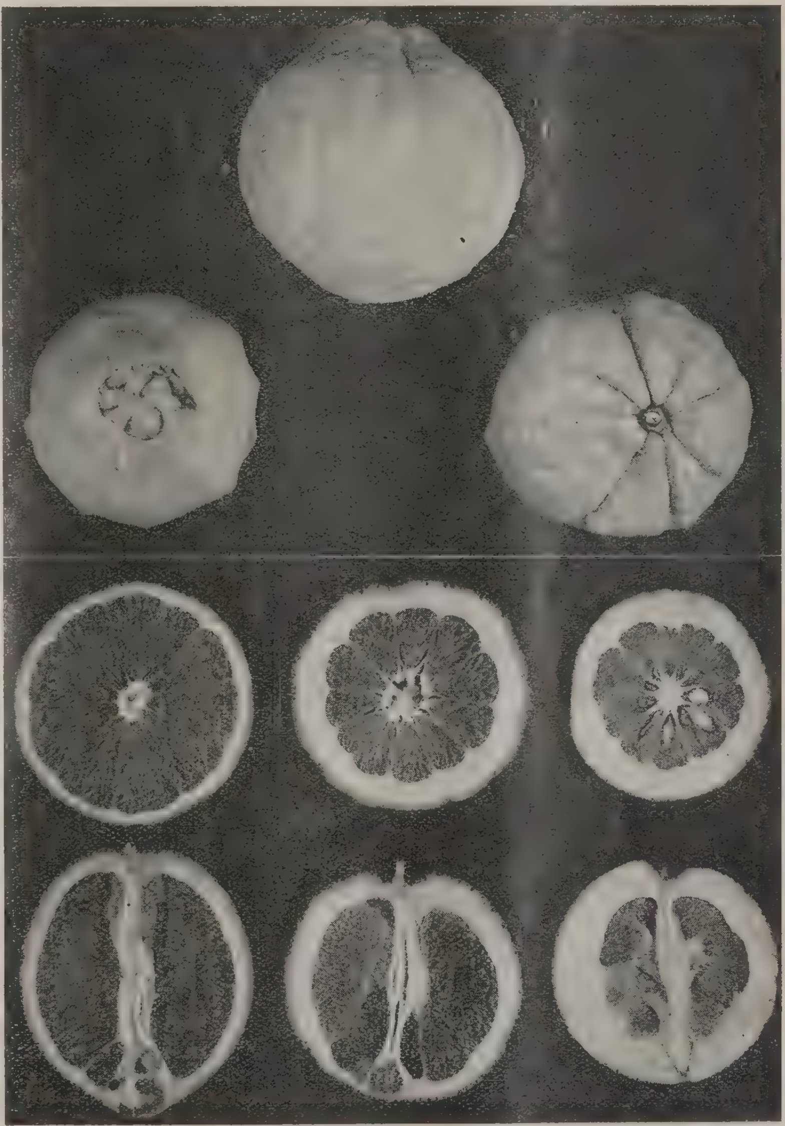
With some varieties of plants certain strains, differing from the original strain, have appeared, largely through bud mutation or, as it is commonly called, "sporting." This is particularly noticeable in the Washington Navel Orange in Victoria, and this variety has been responsible for the appearance of many strains. Several of these strains have been propagated by nurserymen, and in some cases have proved useful. The second kind of selection then is selection within one variety which has been propagated by budding or grafting, and is known as a clonal variety.

In addition to these mutations or "sports," there are those differences which may be termed fluctuations, which are due to the effects of different soils and climates on the same strain of any particular variety. These fluctuations are of a temporary nature only, and, therefore, will not be dealt with at this stage.

Mutuations may be divided into three classes:—

1. Those which are permanent and which, when propagated, will reproduce the characteristics of the mutant.
2. Those of a variable nature, which continue to vary after propagation, producing inferior and good-quality fruit on the same tree.
3. Those of an occasional form, such as the malformed and other teratological curiosities, common in Navels, which cannot be reproduced by propagation.

In Classes 1 and 2 we are probably dealing with vegetative mutants, i.e., sports arising in the leaf buds of the trees, whereas in Class 3 the sport has arisen in the flower bud, and



Top (three Oranges)—Shows "off type" Navel Oranges (so-called Australian Navel). Note coarse open navel, coarse texture of the rind, and deep creasing around the stem.
Bottom (six half Oranges)—Showing transverse sections of:—1. Good type Washington Navel. 2. Poor or off type Navel. 3. Dry strain of a seed Orange.

has, therefore, affected that portion of the flower which will ultimately gives rise to the fruit.

It is only Classes 1 and 2 which are of commercial importance, and it is chiefly these two classes which will affect the quality of the Naval Orange.

Therefore, three possible sources of bud-wood for propagation of the Navel Orange are available. The first is the true Washington Navel strain, examples of which are scattered throughout the citrus districts of Victoria. The two other sources are usually spoken of as "off-type" trees because they are constitutionally different from, and inferior to, the true Washington Navel. One of these "off-types" is that of a permanent or fixed mutation, and the other is the variable mutation. It cannot be denied, however, that among these so-called "off-type" trees there may be variations which are of some commercial value, but it is of a specialised nature, and more often than not they are inferior strains. To further complicate the elucidation and isolation of these strains, sub-strains have appeared, and these tend to mask the original mutant.

What is Bud Selection?

When a subject like propagation is being discussed, the mistake very frequently made is to regard the single tree as the individual unit. The average grower will obtain buds from one particular tree, because it has desirable characteristics. This would be quite a good practice if there were no variations in the tree; but in the case of Washington Navel orange trees variations frequently occur, and, therefore, instead of considering the tree as the unit, we have to look more closely, and use the bud as a unit. Even then, there exists a very remote chance that the bud may grow into a mutating limb. If reasonable care has been exercised in choosing the tree, and its previous performance is known, then it is unlikely that such buds will show variations. At present, the explanation of these mutations is largely a matter of conjecture, but research workers consider that the phenomenon is profoundly wrapped up in the normal multiplication of cells by division.

Bud selection, therefore, resolves itself into the choice of the most desirable types or strains with a view to eliminating as much as possible the chances of propagating trees with inferior qualities.

The question might well be asked, "Where are the true Washington Navel orange trees to be found?" For the time being this question must remain unanswered, as far as the particular location is concerned.

Generally speaking, however, it can be safely asserted that the true strain of Washington Navel orange can be found in all the orange-growing districts of Victoria. One would expect this to be so, because the sources of bud-wood available to nurserymen are many, and trees have been planted at various times up to sixty years ago. These two factors would almost certainly result in the distribution of the true strain as well as a number of mutations.

The influence of soil, climate and cultural treatment all modify the appearance of the true Washington Navel strain, and one of the objects of the investigations now being conducted is to discover these modifications. With this object in view, trees in several districts are being reworked with buds from the true strain of Navel growing in Mildura. The fruit produced on these trees will be compared, and the differences noted. In addition, buds from the same tree will be worked on several kinds of stocks and planted in different districts.

When the results of these experiments are available, it is hoped that many of the "off-type" orange trees growing in Victoria will be top-worked to good types, thereby improving the general quality of the fruit.

At this stage it is only possible to speak in very general terms; but more details will be available later. In New South Wales a start has been made, and, under the direction of the Co-operative Bud Selection Society Ltd., nearly 22,000 selected orange buds have been distributed to nurserymen during the 1930 budding season.

The Victorian Department of Agriculture is endeavouring to arrange a scheme whereby growers and nurserymen will be able to obtain buds from selected trees. It is expected that these buds will be available for autumn budding.

Proposed Australian Apple and Pear Growers' Association.

Conference Called to Meet at Melbourne First Week in December.

THE need for an All-Australian Advisory Council or Association to supervise the fresh fruit export trade, was expressed at the recent Australian Conference of fruitgrowers at Hobart.

Correspondence has been proceeding between the several fruit-exporting States, when the Victorian Fruit-Marketing Association, at the request of some of the other States, drafted a constitution for submission to the Interstate Associations, and called a conference, to meet in Melbourne during the first week of December.

A preliminary agenda paper has been drafted as follows:—

1. The advisability or otherwise of forming an Australian Apple and Pear Export Association. 2. Proposed constitution of Association. 3. 1931 Export.—Preliminary crop reports from the exporting States—(a) Apples; (b) Pears. 4. Forecast of probable 1931 export. 5. Interchange of inspectors. 6. Type of cases, timber for cases, etc. 7. Grading regulations. 8. Freight rates. 9. Co-ordination of shipping programme. 10. Report on recent formation of U.K. Committee to deal with Australian fruit importations. 11. Contract with shipping companies. 12. General.

A complimentary dinner to delegates will be tendered by Mr. H. G. Colombie when the Australasian Championship Cup, won at Hobart, will be presented.

As opportunity offers, delegates will be provided with facilities for visiting fruit-growing districts, cool stores, etc.

It is also proposed to provide an opportunity for delegates to confer with representatives of shipping companies.

CO-OPERATION WITH MARKETS DEPARTMENT.

The secretary of the Commonwealth Markets Department (Mr. E. J. Mulvaney) is convening a conference of State Fruit Supervising Officers, to go into details regarding—(1) Types of cases and timber for cases; (2) grading regulation and other important matters.

By mutual arrangement, these conferences can be held at the same time, and thus the considered views of the leaders of the industry can be secured.

Captain W. J. Wade, representative for Australia and New Zealand of the Port of Manchester, was recently appointed a Royal Commissioner in N.S.W. to investigate matters relating to the Newcastle abattoirs. He presented an able report.

Before coming to Australia Captain Wade was General Superintendent of the Manchester Markets, and he travelled widely in England, the Continent, and America.

Codling Moth Control.

Report on 1929-30 Experiments at Harcourt, Vic.

By R. T. M. Pescott, M.Ag.Sc., Assistant to Entomologist.

(Republished from "Victorian Journal of Agriculture.")

THE CONTROL OF THE CODLING MOTH (Cydia pomonella) is still one of particular importance to the fruit-growers of the State. The season that has just passed has been one in which the weather conditions were decidedly abnormal, giving the fruit-grower an impression that the codling infestation was much lighter than usual. However, taken over the whole of the fruit season, the percentage of fruit spoiled by the codling moth has been well up to the average. It is estimated that at Harcourt (Vic.) this year the average loss was in the region of from 15 to 20 per cent.

The experimental block was originally situated on the property of Mr. T. Code, Harcourt. However, after a perfect flowering period, a frost (recorded as 8 deg. on a thermograph) on the morning of October 22, 1929, destroyed the whole of the young fruit on the trees in this block. A new site was chosen on the property of Mr. Reg. Eagle, Harcourt, where the trees consisted, in the main, of mixed varieties, approximately 20 years old. A further setback was given to the experiments on November 25, 1929, when a severe hailstorm badly marked the experimental block. The fruit later grew out of this marking to a great extent, and the percentage of loss on a plain sample was very small. It was generally noticed that early varieties of apples showed a very low percentage of codling infection, while those maturing later in the season were badly attacked. This was mainly due to the hot weather occurring late in the season, and producing a partial third brood of the codling moths.

An idea of the potential amount of the infection can be realised from the fact that, late in the month of January, 1930, in ten lures of apple juice placed in the trees, on two consecutive nights 121 and 195 moths were collected respectively. This should dispel any idea that last season was not a serious one for codling moth attack.

The object of the experimental work was to **determine a spray programme** which would prove more successful than those already in use, at the same time proving economical from the standpoint of cost. All sprays were applied with an ordinary motor spray pump, with spray-gun attachments, at a pressure of about 320 lb. per square inch. Paste arsenate of lead, and casein spreader, at the rate of ½ lb. of spreader to 80 gallons of spray, were used throughout the experiments.

Time of Applying Sprays.

The first, or calyx, spray was applied when the petals had fallen from the majority of the blossoms. The timing of the cover sprays was determined by observations—

(a) Of the presence of codling moths in the orchard;

(b) Of the number of moths caught in traps, baited with 10 per cent. vinegar solution, which were hung in unsprayed trees in the orchard.

The vinegar solution was found to be equally satisfactory for the second brood moths as for the first.

It was found necessary to apply five cover sprays.

Details of Spray Tests.

(All sprays were applied by motor pump at a pressure of 320 lb. per square inch.)

Spray No.	Material.	Date of Application.
	Block "A."—Control.	
1	Arsenate of lead—5 lb. in 80 gals. water	1/11/29
2	„ „ „ „ „	11/11/29
3	„ „ „ „ „	27/11/29
4	„ „ „ „ „	19/12/29
5	„ „ „ „ „	20/1/30
6	„ „ „ „ „	15/2/30
	Block "B."—Lead followed by Oil.	
1	Arsenate of lead—5 lb. in 80 gals. water	1/11/29
2	„ „ „ „ „	11/11/29
3	White oil—1 in 40	27/11/29
4	„ „ „	19/11/29
5	„ „ „	20/1/30
6	„ „ „	15/2/30
	Block "C."—Lead followed by Oil.	
1	Arsenate of lead—5 lb. in 80 gals. water	1/11/29
2	„ „ „ „ „	11/11/29
3	White oil—1 in 40	27/11/29
4	„ „ „	19/12/29
5	„ „ „	20/1/30
6	„ „ „	15/2/30
	Block "D."—Lead and Oil Alternately.	
1	Arsenate of lead—5 lb. in 80 gals. water	1/11/29
2	„ „ „ „ „	11/11/29
3	White oil—1 in 40	27/11/29
4	Arsenate of lead—5 lb. in 80 gals. water	19/12/29
5	White oil—1 in 40	20/1/30
6	Arsenate of lead—5 lb. in 80 gals. water	15/2/30

Results of Tests.

In all cases, percentages were computed from actual count of apples on each tree. All windfalls were carefully examined for codling infection, and records were kept of these throughout the year. No distinction was made between apples showing one, two, or more entrances, nor between fruit with entrances and stings, if the latter caused a blemish rendering the fruit unfit for export. All sorting and counting were done by the writer. The trees were examined on January 8, and a count of codling infection made. This would represent infection from the first brood.

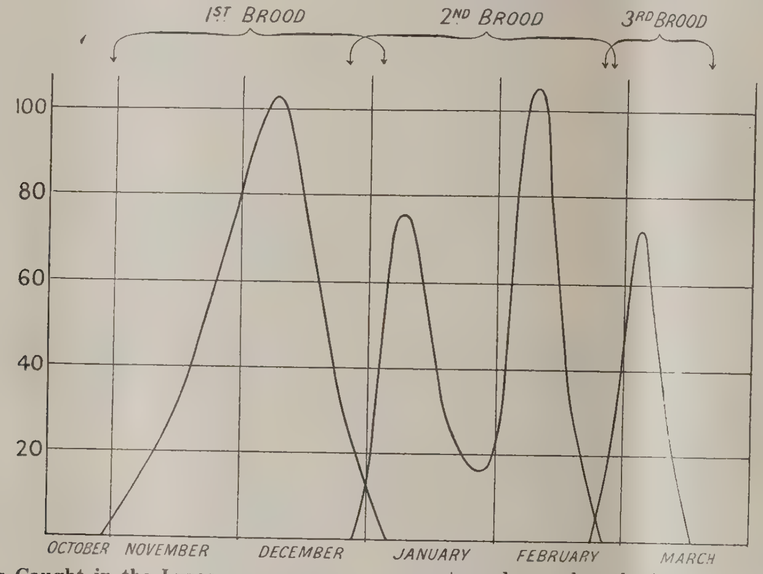
Block.	Material.	Percent. of Codling on 8/1/30. %	Percent. of Codling, Picking Time. %
"A"	Arsenate of lead	5.8	17.6
"B"	White oil	1.3	3.6
"C"	White oil	3.1	5.5
"D"	Lead and white oil A, alternately	1.9	3.8

These results again bear out the conclusions derived from previous experiments, namely:—

(1) Arsenate of lead alone fails to give a satisfactory control.

(2) Arsenate of lead sprays, followed by white oil emulsion sprays at a strength of 1 in 40, again gave a very marked increase in control over other sprays, and, moreover, it was economically sound to use such sprays.

A further interesting result obtained was that in Block "D," where lead and oils were used alternately. The control obtained here was of the same measure as that of the oil sprays alone following lead. This is important, in that the same control is obtained for a reduction in the cost of the spraying materials.



Insects Caught in the Lures.

An accurate weekly record was kept of the number and types of insects caught in the codling lures. The following table sets out in detail the insects captured over the course of the experiment:—

Injurious Insects.

Codling Moth (Cydia pomonella)	713
Light-brown Apple Moth (Tortrix postvittana)	74
Cut Worms (Mamestra sp.)	14
Click Beetles (Monocrepidus sp.)	9
Bronze Apple Beetle (Lagra grandis)	4
Looper Moths (various genera)	13
Beetles (unidentified)	4

Beneficial Insects.

Lace Wings (Chrysopa ramburri)	113
Dragon Flies (Lestes sp.)	12
Bees (Apis mellifera)	27
Parasitic Flies (Rutilia sp., Syrphus, sp.)	49
Lady Bird (Leis conformis)	16

Other beneficial insects included several species of ants, the native Lady Bird (Rhizobius ventralis), Clerid Beetles.

Other insects which were present on decaying fruit, and caught in the traps, were Vinegar Flies (Drosophila sp.), and Fungus Flies.

Life History Studies.

First Brood.—No accurate details are available.

Second Brood.—Numerous young larvae were kept under observation, and it was found that the average period that elapsed from the time they entered the fruit until they left it was about sixteen days. The first larvae were found in the bandages on December 26, 1929. It was further observed that the period of pupating of these larvae never occupied more than one week.

Many of these pupae were kept under observation, and they were found to remain in the pupal stage for a period of only nine days, a period which is considerably less than that occupied by the pupae of the first brood. This emphasises the effect of temperature conditions on the development of the codling moth.

Third Brood.—It was found with this brood that the feeding period of the larvae extended over an average of seventeen days, when the larvae left the fruit and entered the bandages. These remain as the over-wintering larvae for the following year.

Summary.

From actual observations in the Harcourt district, where it was estimated that the loss of fruit was in the neighborhood of 15 per cent., it was evident that the codling moth was as prevalent in the season 1929-30 as in previous years. Reports have shown that in other districts the infestation was not so severe as usual, which fact might be accounted for in the abnormal season experienced.

The results of the experimental work showed that satisfactory control could not be obtained by the use of lead arsenate alone. This confirms the results of previous experiments, carried out at Harcourt in the years 1926-29. Satisfactory control was, however, obtained where a white oil emulsion was used as an ovicidal spray after the preliminary arsenical calyx sprays. This also bears out the results of previous work. A summary for the three seasons, 1927-30, is as follows:—

Arsenate of lead sprays alone, 30 per cent. codling.
Arsenate of lead calyx sprays, followed by white oil, 9 per cent. codling.

The results of Block "D," in which arsenate of lead sprays and white oil sprays were used alternately, look promising, but at the present cannot be recommended.

The following spray programme, based on the results of three years' experiments, can be recommended:—

> Two sprays of arsenate of lead (5 lb. of paste lead in 80 gallons of water), as calyx sprays, applied at intervals of ten days, followed by three or four sprays (depending on weather conditions) of a white oil emulsion (1 in 40), at intervals of approximately one month. The timing of these latter sprays should be accurately determined by the orchardist himself, by the use of lures placed in the trees in his orchard.

VICTORIA.

Crop Prospects ∴ District and General News.

PROSPECTS for the coming fruit crop are set out as follows by the Superintendent of Horticulture (Mr. J. M. Ward) as follows:—

Deciduous Fruit.

The chief commercial varieties of Apples, notably Jonathans, disappointed in the setting. The non-setting of this variety in orchards where there were no pollenizers was very marked. On the other hand, the setting of Jonathans was medium to good when growing in juxtaposition to Granny Smith, Stewart's, Rokewood and other simultaneous bloomers. Five Crown and Rome Beauty may possibly be light in a number of orchards. From present appearance the apples will not exceed 70 per cent. of a normal crop. The indications are that Pears will not yield a heavy crop, but it is expected that the yield will be better than that for apples, but will not exceed 75 per cent. of normal.

Stone fruits generally promise well. Cherries are good to heavy; Apricots, heavy to very heavy; Peaches, both canning and dessert, good to heavy, and Plums and Prunes also promise a good crop, somewhat exceeding normal.

Almonds have set a heavy crop, and the yield should be much higher than for some years.

Berry fruits are good, and the prospects are that the yield will be at least normal.

In every district it is noticeable that where trees were well treated in respect to manuring, pruning, irrigation, thinning, etc., the setting has been generally good. On the other hand, trees that were devitalised through neglect and lacked cross-fertilisation are uniformly a failure.

Viticulture.

Since the September report, the outlook has been transformed by bountiful rains all over the State. Only 78 points was registered last month at Rutherglen Viticultural Station. October has brought 2.36 in. to 21st instant, with promise of more—good, steady rain, none running to waste; over an inch between 5th and 7th, and a similar fall between 11th and 14th.

The spring has been rather abnormal, and early budburst in the North-West, though later in the North-East, then growth slackened, and the vines are now backward for this time of the year in all districts. Wine sorts are showing a very fine crop where they have escaped frost.

Sultanas, on the other hand, have a smaller "show" than last season—the usual reduction after two heavy crops. Yield, however, is not necessarily proportionate to the "show," and there is plenty of blossom for a good vintage if all goes well.

The frost of 24th September did more harm than was at first evident. Though the State's vintage will not be materially reduced, as most vineyards escaped altogether; individual ones have been hard hit. In some North-West vineyards, buds were destroyed when only just swelling, so that the injury is only now apparent.

The repeated showers are favourable to vine diseases —Black Spot and Downy Mildew. Departmental warnings to spray have been issued in the press and broadcast. To these there has been a good response. Two factors have so far saved us from Downy Mildew; the absence, owing to the comparatively dry subsoil, of puddles suitable for the germination of over-wintering spores; and, secondly, the low temperatures when it rained. The falls were mostly at night, with the thermometer seldom over 55 deg. at Rutherglen. Warm rain is the great danger with Downy Mildew; about 73 deg. F. is the critical temperature.

The danger is by no means past.

All vines should have been sprayed ere this. Those who wisely sprayed early should soon repeat the treatment to protect leaves grown since they were last sprayed.

Citrus—Heavy Blossoming.

Reports from all the citrus supervisors in the citrus districts of the State show that there is a heavy blossoming in all varieties of citrus trees. It is too early at present to forecast the coming season's crop, but with favourable weather conditions, the trees should set a good crop. Lemon trees are flowering well in the southern districts, and there is a good crop of summer lemons showing. The main crop of lemons is a light one, and prices are now rising in consequence.

The Harcourt District.

Pears, good; Apples, probably 20 per cent. less than last year. Dunn's will be light.

THE BLOSSOMING PERIOD is now practically over, and it is possible to give a fair estimate of the fruit crop for the coming season.

Pears.—The weather conditions proved almost ideal, and as there was an abundant blossoming, a good set of fruit resulted. A good pear crop seems assured.

Apples.—Adverse weather conditions have played havoc with the blossoms of some varieties, particularly Dunn's, which is largely grown, and is the principal export variety. A hot spell early in the month forced the blooms open; this was followed by wet and cold weather, restricting the activities of fertilising insects, as well as the period in which they could operate, as most of the blossoms opened simultaneously.

Thrips also made their appearance in plague numbers, no doubt a contributing factor in the poor setting. This was particularly noticeable where Dunn's were planted in blocks, and no facilities for cross fertilisation were provided. On the whole, there appears to be a very light setting of this variety.

Other varieties, such as Jonathans, Cleopatra, Rymer, that had a more extended blooming period, have set fair crops.

Many growers sprayed for the thrips, but in most cases the result was unsatisfactory.

The pear crop should be equal to or in excess of last year, but the apple crop has been reduced by about 20 per cent. below. This is due to the poor setting, as under normal conditions a crop equal to last year was anticipated.

It is too early to forecast the probable crop of late blooming varieties, such as Rome Beauty and London Pippin; there is plenty of blossom, but thrips is very plentiful.—Jas. H. Lang.

Harcourt, 21/10/30.

Wandin.

Strawberries are setting well, but will be very light as compared with last year's prolific crop—probably one half.

Gooseberries fair, Logans flowering well and indications are that they will be good crops.

Cherries, after blooming exceedingly well, have turned us down, a few frosts lately have reduced the crop a good third; there looks to be a light pick left.

Plums are setting heavily—all sorts.

Raspberries and Blackberries are running to wood instead of fruit, and both will be light.

Red Currants, good; Apples and Pears medium.

Passion fruit vines are starting to move, and owing to the mild winter, this fruit promises to be good.

Adverse Effect of Sugar Agreement.

Growers here are anxiously awaiting the result of the Prime Minister's action in the matter of sugar; it just means the difference between a fair living and poverty, so we are all looking forward for favourable consideration. Some growers are sowing peas and beans in case of the worst happening.—J. M. Mitchell.

Wandin, 23/10/30.

Ardmona.

Fruit crops generally lighter than last year.

The fruit crops this season promise to be much lighter than last year. William Pears are showing a light crop, about 50 per cent. of last year. Prunes are very light. Dessert Peaches are also light. Apricots are patchy, some with heavy crops, some light. Cling Peaches are lighter than last year, the mid-season ones showing about 60 per cent. crop, while the late varieties show about 75 per cent. of last year.

Good rains during October have improved the look of the orchards, and enabled the plowing and cultivating to be completed with the ground in good condition. Green aphis is now among the peaches, and making rapid headway in isolated patches.—Victor R. McNab.

In the Kyabram district indications point to a patchy apricot crop. The difficulty experienced in disposing of the apricot crop in the last two or three years has resulted in quite a large acreage being uprooted, while others have been cut down in order to work them over to varieties acceptable to the canneries.

Peaches blossomed well, particularly the canning varieties, and promise a heavy setting.

In many cases early dessert varieties will require thinning. In some of the orchards, the early-maturing varieties will be a total failure.

During the winter and early spring, black peach aphis has been persistent, and thrips have appeared with the warmer weather.

It is expected the pear crop will be light.

PEAR EXPORT.

Association Formed at Doncaster.

To develop the pear export trade, fruit-growers at Doncaster have formed a company. Shares have been taken up by local growers and those in surrounding districts. Arrangements are being made for pear export in the coming season.

The provisional directors of the company are Messrs. T. H. Petty (chairman), J. J. Tully, V. Lawford, F. Moore and A. E. Ireland. Messrs. E. I. Lawford and F. J. Garford are assisting in an advisory capacity. Mr. Claude Bull is the secretary pro tem.

The teacher told the children about the Garden of Eden and how Adam and Eve had disobeyed after being forbidden to eat the fruit of one tree.

"Now, children," she said, "can anyone tell me what lesson that teaches us?"

"Yes, miss," replied a small boy, "Eat less fruit."

Victorian Fruit Marketing Association.

The monthly meeting of the Executive of the Victorian Fruit Marketing Association was held at the Board Room, Commercial Travellers' Association, on October 24.

There were present: Messrs. Colombie (president), C. M. Griffeth, W. H. Carne, W. A. Webb, K. Eagle, J. W. Bailey, J. B. Mills, F. R. Mellor, A. S. Harrison, J. W. Barker, F. W. Cave, and the secretary, R. E. Boardman. Messrs. J. M. Ward (Superintendent of Horticulture) and E. E. Meeking (Senior Fruit Inspector) also attended. Apologies were received from Messrs. Ford, Brown and Parnham.

The Minister for Agriculture wrote at length explaining the reasons for his own and Mr. Pollard's inability to be present at the annual meeting.—Letter received.

The action of the secretary in writing a letter of sympathy with Mr. Ford, owing to the death of his father, was confirmed.

Resignation of Mr. Fowler.—Mr. R. E. Fowler wrote resigning from the Executive, he having gone in completely for tobacco growing. The resignation was regretfully received, on the motion of Messrs. Webb and Griffeth, both speaking in terms of appreciation. It was decided to send a letter of thanks to Mr. Fowler for his valued services, and wishing him success in his new enterprise.

It was decided to defer the appointment of a representative for the north-east until next meeting.

Growers' Vice-President.—Mr. C. M. Griffeth, was elected growers' vice-president, on the motion of Messrs. Webb and Bailey.

Deputation to Customs Minister.—The secretary reported that arrangements had been made for a deputation from the Association to wait on the Minister for Customs (Mr. Fenton), but owing to Mr. Fenton having been called to Sydney, the deputation was received by Mr. Forde, Acting Customs Minister.

Mr. Hill, M.H.R., who had introduced the deputation, spoke in favour of our request that softwood shooks for cases for canned and fresh fruit should be admitted under tariff item 404 10 per cent. ad. val., this being the rate for boxes of dried fruit. Strong arguments were advanced by delegates from the V.F.M.A. and fruit canners. A sympathetic reply had been received from the Minister, who promised prompt attention in Cabinet.

Pear Export.—Decided, on the motion of Messrs. Bailey and Carne to approach the Markets Department requesting permission to export pears in three-quarter bushel cases.

Membership.—Mr. Harrison tabled correspondence with Tyabb growers, some difficulty having arisen in connection with levies of fruit sold through the packing shed. —It was decided that Messrs. Griffeth and Boardman visit Tyabb and Mornington Peninsula at the earliest opportunity, and that a meeting of growers be subsequently convened.

Suggestions were put forward for the creating of district councils for the V.F.M.A., or, alternatively, the organising of quarterly meetings of growers, when cultural lectures and demonstrations could be given.

Australian Apple and Pear Export Association.—The secretary reported progress, and introduced the draft constitution, which had been prepared by a sub-committee. It was reported that the Commonwealth

Markets Department was about to call a conference of State Fruit Supervising Officers, to deal with the question of cases and grading regulations.—It was decided to confer with the Markets Department regarding a mutually agreeable date for the conference, and to suggest that it be held the first week in December.

Overseas Committee.—Mr. Colombie reported that a committee of fruit receivers had been formed in London to assist in an advisory capacity for the better distribution of Australian fruit.—It was decided, on the motion of Messrs. Bailey and Lawford, to cable congratulations, and to notify of our willingness to reciprocate.

On the motion of Messrs. Lawford and Webb, it was decided that the Victorian delegates be Messrs. Griffeth and Mills, Mr. H. G. Colombie to preside without a vote.

Railway Refunds for Softwood Cases.—The secretary reported re interviews and correspondence with Railway Department regarding the refund of freight on softwood cases exported during the 1930 season. Reports were received from delegates that the railway refunds had been received.

Forestry.—The South Australian Perpetual Forests Ltd. wrote giving details of their commercial pine forests in South Australia, and offering facilities for growers to secure adequate supplies of softwood for case making.—Letter received.

Mr. M. Nathan submitted specimens of Korean white pine, 3-ply. The specimen of timber was appreciated, but it was pointed out that duty was charged on a 3-ply basis, and was therefore excessive for fruit cases.

Vigilance Committee.—Decided that a Vigilance Committee be appointed to consist of the following:—President, two vice-presidents and Messrs. Brown and Mellor.

During the morning session and at lunch, Mr. E. E. Meeking, Senior Fruit Inspector, gave addresses on his experiences in England and America, advocating some necessary improvements in regard to the export of Australian fruit. Mr. Meeking was cordially thanked.

Mr. E. E. Meeking's Return.

Mr. E. E. Meeking, Senior Fruit Inspector, Victorian Department of Agriculture, recently returned from a visit to England and America, where he observed many phases of fruit production and marketing. Mr. Meeking has addressed meetings of the Victorian Fruit-Marketing Association, Doncaster Fruitgrowers' Association, giving helpful information. With certain necessary improvements, Mr. Meeking is convinced of a bright future for Australian fruit exports.

Bees and Orchard Spraying.—In his book, "Profitable Honey Plants of Australasia," Mr. Tarlton Rayment remarks:—"Bee-farmers adjacent to orchards often lose heavily because of ignorant growers who persist in spraying—with poisonous compounds—trees in full bloom. Though it is very necessary to spray for the purpose of keeping fruit pests in check, scientists have demonstrated the danger of damaging the pollen at certain stages. A decreased percentage of pollenization (consequently less fruit set) frequently results from the ill-directed use of poisons. Fortunately, all progressive orchardists are well aware that the proper time to spray is just before the blossoms open, and again as the petals fall."

Harcourt.—The Harcourt Fruit-growers' Progress Association has elected the following as directors for the ensuing twelve months:—Messrs. J. H. Ely, H. M. McLean, F. Gaasch, G. Douglas, W. Eagle, H. Frankling and K. Eagle.

PENINSULA CO-OP. FRUITGROWERS' ASSOCIATION.

Successful Year's Operations.

THE annual report of the Peninsula Co-op. Fruitgrowers' Association Ltd., signed by the General Manager, Mr. T. E. Butler, reveals considerable successful activity on behalf of growers. Up to June, 1930, the business conducted totalled just or £30,000, or practically four times the value of the previous record. Apart from the business at Somerville, activities were re-commenced at Hastings.

In the packing sheds the quantity handled at Somerville was over 30,000 cases, and at Hastings 15,831 cases.

Structural improvements had been made at the Somerville, and new plant had been installed.

Apart from the supplying of fruitgrowers' requisites, growers had been paid £3,908, covering 24,092 cases of fruit on a naked basis. The fruit was sold for export on an f.o.b. basis.

PRIMARY PRODUCE MARKETING BILL.

Rejected by Legislative Council.

The debate on the Primary Products Marketing Bill was revived in the Victorian Legislative Council on October 28. A resolution was proposed to delete "fruits (fresh, canned or dried)" from the provisions of the Bill.

During the debate, strong opposition developed regarding the principle of the Bill, and a test vote was requested.

Several members who favored the retention of the Bill, in order to make amendments and leave the dairying and poultry industries under the provisions of the Bill, declared themselves in favor of deleting the fruit industry.

However, on the test vote being taken, the Bill was defeated, and the Minister for Health (Mr. Beckett) stated that the Bill would be removed from the notice paper.

MITCHAM R.S.S.I.L.A.—AUTUMN SHOW, 1931.

There was a very good entry of fruit for the Mitcham Diggers' Show last autumn. The event proved to be a re-union of quite a goodly number of Eastern district fruitgrowers, who were favorably impressed by the number and quality of exhibits. It will not surprise them to learn that the coming year—on April 18—another show is to be held at Mitcham by the Diggers. Arrangements are already on the way to bring the event before fruitgrowers for their support, and, if they had seen the first effort, would decide that the exhibition is well worthy of their support. Much local interest is being taken in the show. Competition in fruit class should be keen.

E. V. PANELLI,
Hon. Secretary.

67 Doncaster East-road, Mitcham.

OBITUARY.

Mr. A. H. Benson, previously Director of Fruit Culture, Brisbane, died recently. The late Mr. Benson was previously connected with the Tasmanian Department of Agriculture.

ANSWERS TO CORRESPONDENT

"R.H.F.," Bowenville, Queensland, writes:—(1) Do you know if the following three American pears are in Victoria—Seckel, Dana Harvey and Lawrence? I would like to get budwood off them. (2) I have a pear sent to me as Winter Nelis, which it is not, and would like to know its name. It is about the same colour as W.B.C., but more blocky, having no waist. Large, ripens end of May. This is in the hill country; flesh very buttery and yellowish; a delicious pear, but it is astringent slightly. (3) Can you tell me the rule in arithmetic to find number of gallons of waterfall on a given area for each point of rainfall? For instance, the house roof is 52ft. x 31ft., and I would like to be able to calculate for this and other roof catchments.

Answer (by A. W. Jessep, Principal, School of Horticulture, Burnley, Victoria):—(1) The two American pears—Seckel and Lawrence—are somewhat similar in their habits, being small, sweet, but not suitable for a commercial orchard, and although we had Seckel here, it died out last year. I did not think it worth while trying to save it. I do not know Dana Harvey, but there is Danas Hovey, which is also somewhat like the two mentioned above. I do not know of anyone in Victoria having these pears, but, of course, they may be in some of the home gardens. (2) It is difficult to name a fruit from the description, but if your reader forwards two or three pears in the fruiting season, perhaps it could be named. (3) To find how much water falls on a given space, measure the ground area that is covered by the roof in feet and the number of gallons per point of rain can be found by dividing the number of square feet by 194, i.e., a point of rain over 194 square feet is equal to one gallon. For a large area a point of rain over an acre is approximately one ton or 224 gallons of water. For the house, 52ft. x 31ft. equals 1612/194, equals 8 1/3 gallons per point of rain.

New Zealand.

Utilization of Imported Fruit-Case Timber.—Writing on this matter, Mr. R. G. Hamilton, Orchard Instructor for the Waikato district, remarks: "I notice that the roll-cut timber of the imported cases has been condemned because of its excessive pliability. Where the ordinary-cut timber is used on the bottoms, and the roll-cut timber on the top, the bulge is usually all at the top with none at the bottom. If, however, the roll-cut timber is used as bottoms and the ordinary-cut timber for tops, a very fine package is secured, with an even bulge both top and bottom. A grower in the Auckland district happened to use all the roll-cut timber as bottoms, and the improvement was very noticeable. It makes a far more even package than where ordinary-cut tops and bottoms are used."

Horticulture in Canada.

The 8th annual report of the Canadian Horticultural Council just to hand shows a vast organisation, which has already done much for the horticultural development of our sister Dominion. The Council, which came into being the same year that the New Zealand Institute of Horticulture was registered, now represents 216 horticultural and allied industry organisations, with a membership of over 85,000. One of the main objects of the Council is to bring about a closer co-operation between those engaged in horticultural and allied industries and a fuller understanding of their problems.

The fruitgrowers and nurserymen of Canada have direct representation on the Council. It is said to be a progressive organisation, and up to the present has handled some 25 horticultural subjects.

Tomato Culture.

Helpful Seasonable Advice.

TOMATO CULTURE is now carried on extensively on a commercial scale and in private gardens.

An interesting bulletin (No. 26), has been issued by the Victorian Department of Agriculture, giving cultural and pest control methods. By courtesy of the Department we are publishing herewith their hints and illustrations on the pruning of Tomatoes.

Pruning is necessary for production of early fruits. Plate 1, Fig. 1, shows the lateral growth produced from the axil of the leaf at A with the leader or terminal growth at C, and the flower clusters at B. Fig. 2 shows the lengthened growth of laterals at D, terminal or leader growth at E, fruit clusters on the main stem F, and flower clusters on laterals at G. If all these lateral and leader growths were allowed to remain, there would be an increased crop, but late ripening of the fruit, as unchecked lateral and leader growths do not promote early setting of the fruit. Lateral growth should be pinched out as soon as it appears as shown, Plate 2, Fig. 1. This will promote the production of flower clusters, and setting of the fruit. When two or three flower clusters have been produced, the leader is stopped at one leaf above the cluster of flowers as shown, Plate 2, Fig. 1. The plants should be looked over every week to keep down lateral growth until flowers are produced, and the leader checked. The checking of the leader turns the energies of the plant to the growth and maturing of the fruits already set. If the laterals are not removed the plant generally drops its first flowers and earliest fruits.

Sometimes the terminal bud is removed in the cold frame about three weeks before the plants are transferred to the field. This applies only to plants that are not to be cultivated on the stake. Plants so treated in the cold frame develop stout stems and good root system, which provide the framework for a large bushy plant capable of carrying heavy crops when planted in the open.

Plate 2, Fig. 1, shows plant staked and pruned to two clusters of fruit; Fig. 2, to three clusters of fruit. Should trellising be adopted, as shown, Plate 2, lateral growth is permitted after the first two or three clusters of fruit are set. The laterals are tied to the cross ropes or wires, and the point of growth pinched after a cluster of fruit has formed. The pinching or cutting out of large laterals, as shown at D, Plate 1, Fig. 2, is very injurious. They should be pinched out when 1 or 2 inches long. If they are allowed to remain and develop leaves and woody tissue, this is done only at the expense of other parts of the plant; the removal of large laterals upsets the balance between leaf and root system, and causes injury.

Pruning increases the size and color of the leaf, hastens the setting of the fruit, and increases its size. The Chinese check lateral growth until the flower clusters are formed; they then pinch the leader, and after that allow the plant to grow at will.

In staked plantations where Tomatoes are more thickly planted, it will be found necessary to keep down lateral growth for some weeks after the leader has been checked. This is to allow the free access of light and air to the plants. This thinning, however, should be of such a character as to retain sufficient foliage to prevent sun and scald of the fruit.

Tomato plants allowed to grow unchecked may produce more fruit, but this is compensated for by closer planting on the staking system, the increased size of the fruit, greater facilities for keeping down disease, and bigger prices through early ripening.

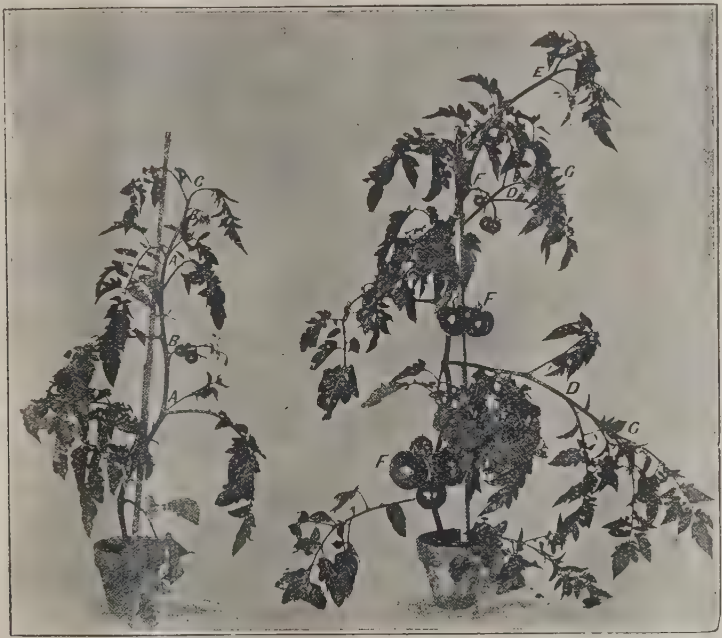


Plate 1.—Tomatoes Staked and Tied, showing Lateral and Leader Growth.

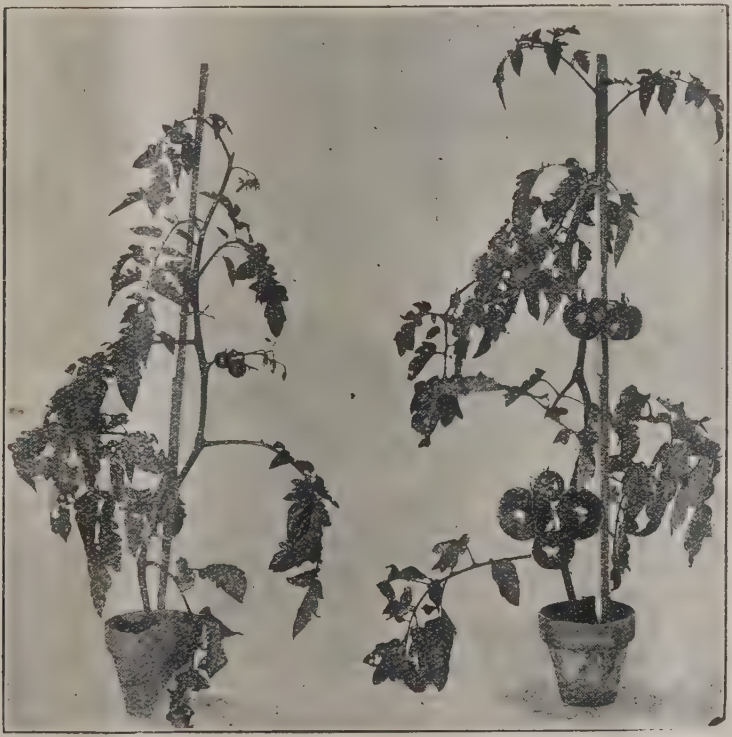


Plate 2.—Tomatoes Pruned, Leader and Lateral Growth removed.

(Illustrations by courtesy Victorian Journal of Agriculture.)

ROOT GALL IN FRUIT TREES.

Important Studies in South Australia.

MR. GEO. QUINN (Chief Horticultural Instructor) submitted the following report on a resolution of last year's Conference of Hills Branches that the Department of Agriculture take immediate steps to ascertain the cause and remedy of root gall in fruit trees, etc.: "I have to report that this matter was taken up some years ago by the Horticultural Branch in conjunction with Professor Osborn, Professor of Botany and Parasitology of the University of Adelaide. Samples of the galls were supplied to him from time to time in all stages of growth, and he endeavored to determine if the cause was an organism, as had been claimed in the United States of America for a similar defect. I understand Professor Osborn **isolated a bacterial organism** from the fresh tissues of a gall which he thought would be found to be identical with the Pseudomonas tumefaciens described by Erwin Smith and Townsend and other American plant pathologists. The removal soon afterwards of Professor Osborn to the University of Sydney precluded further bacteriological study on the subject.

With a view to endeavoring to ascertain the possibilities of the dissemination of the gall by ordinary orchard practices, such as pruning the plants and tilling the soil, I secured specimens of young Apple trees from local sources, and from nursery stock ex-Victorian nurseries affected by fresh growing galls on their roots.

Two dozen young trees of Apple, Almond, and Loquat were secured, all of which were apparently free from the gall. The bark on the stems of half of these trees was sliced and raised to expose the sap layers just below ground level, and the scraped juice and thin slices of tissue of the freshly cut galls introduced beneath it, prior to tying the bark back into close contact with the cambium. The other half of the trees, which were used as checks, were similarly sliced with a sterilised knife only, and tied back in a like manner. Both lots were planted side by side in the vinery at the Adelaide Experimental Orchard.

Along with the above, two Apple trees, on the roots of which fresh galls were growing, were planted side by side with two clean rooted Apple trees, and afterwards the sliced surfaces of fresh galls were tied and bound under the overlapping bark of their stems, below ground level. Thirteen months later all of the trees were very carefully dug up and the soil hosed off the roots. In no instance had the slicing caused infection to be transmitted to the clean trees, and the intergrafted gall had dried and crumbled to powder under pressure, though still adhering to the roots of their respective original host trees.

The American investigators have transmitted through pure cultures their crown or root gall organism from various fruit trees to others, as well as to many common garden plants, and produced the galls on them both above and below the ground. In California it is claimed quite 70 per cent. of the soils are infected by this or similar forms of bacteria, and trees planted therein are infected suspectedly through wounds made into the sap-bearing tissues.

The incidence of the gall found here commences in a small wart-like growth on the roots, such as is caused by eelworms or bacteria, in the case of the roots or legumes. It rapidly enlarges and grows throughout the vegetative season of the host plant, and then the outer and greater bulk dries up into hardened semi-woody mass, in which the tissues are twisted and superimposed into a multitude of irregular, over-lapping, short folds. It is evident the tree building material concentrated to the injured spot has been prevented from forming normally co-ordinated groups of cells capable of maintaining life.

Although the galls may assume such large dimensions, a close examination usually reveals the fact that the connecting tissue between the host and a large gall may not be thicker than the cross section of a pencil, or approximately ⅜in. My observations lead me to conclude that the defect is much more abundant on trees planted on sandy soils in warm districts. Among the stone fruits, **the Almond, Peach, and Plum** are more attacked than the Apricot; the Pear appears particularly susceptible to gall injuries, and the Apple not nearly so, in fact, it has not come under my notice on mature Apple trees.

Citrus trees, if attacked at all, are never reported as seriously injured. The location on the tree of the gall is of the utmost importance. If attached to the collar or crown where the stem and roots meet, there is great danger of the tree being totally ruined.

If the galls are attached to roots a foot or more away from the step, trees may be infected for many years without displaying any particular disability in consequence. I have dug up several galls ranging from the size of a clenched fist to as large as a child's head attached to roots not thicker than a human finger, and yet the fifteen year old Peach tree host gave no sign of inconvenience therefrom and continued to progress for years afterwards, though other galls were subsequently unearthed. As far as **remedial measures have been applied,** it is indicated that planters should examine young nursery stock for the presence of galls on the roots or crowns, and carefully cut away any found there before planting the trees.

As seldom any evidence is found on the young trees at planting time, they should be watched during the first few years for the appearance of any gall-like callosities showing on the stem above the root crown. If any are seen, they should be carefully cut away into the healthy sap layers below, using a sharp chisel or knife, and an antiseptic dressing such as Bordeaux paint (consisting of 1½ lbs. of copper sulphate and 3 lbs. of lime in 2 gallons of water) should be applied to the wounded surface, before painting it over with lead paint, tar, or asphaltum, to ward off moisture.

In California, some growers claim if the trees are carried safely over the first five or six years they are usually safe from gall attacks afterwards. **In respect to replanting** over the positions where gall diseased trees have been removed, our experience at the Experimental Orchard at Berri may be worth citing. There, a number of Pear trees developed huge crown galls below the surface, and when the stunting effect on the tops began to indicate something amiss, excavation revealed the cause. Several of these trees were dug out during the summer and the ground excavated for replanting the following winter.

When the soil was filled in again the galls, which were also found on the roots, were pulverised and mixed with the soil into which, other apparently clean young Pear trees were planted. About four years later these young trees, which were still growing nicely, were dug up, and it was found that some of their roots carried galls varying from about the size of a Grape berry to that of a fowl's egg. Whether, in this instance, the remains of the old galls or the soil itself was the cause of this infection I am unable to say, but the fact remains as stated.

At any rate, no harm would be done by collecting and burning over the spot all of the excavated roots and galls, together with any other trash calculated to sterilise the soil about to be replaced when replanting."

Thinning of Apricots.

(By P. H. Thomas and T. D. Raphael, Tasmanian Dept. of Agriculture.)

ONE OF THE FACTORS operating against the successful marketing of Apricots, especially for dessert, and processing purposes, is the quantity of undersized fruit which is produced and enters into competition with the better quality fruit.

The majority of growers realise the importance of thinning as a necessary adjunct in the production of this crop, especially in seasons of abnormal yields, and generally reduce the fruits by this means to a quantity which is considered to be within the capacity of the trees to develop to a satisfactory size and quality.

In order to investigate the economic advantages of thinning as applied to Apricots, and if possible record the actual increases in size obtained, an experiment was carried out amongst a number of trees at the Bridgewater Plots. Four plots of ten trees were selected for the tests, an endeavor being made to restrict these to comparable trees of similar size, health and development.

In each plot half of the trees were thinned and half left untouched.

All the trees were carrying very heavy crops, and after thinning had been completed, the fruits from the different trees were counted and weighed separately:—

Average Weight of Fruits.

Plot.	Unthinned. Ozs.	Thinned. Ozs.	Balance in favor of thinning. Ozs.
A	1.05	1.13	.09
B	1.16	1.18	.02
C	.92	1.18	.26
D	1.03	1.13	.10
Average weight of fruits based on total.	1.04	1.16	.12

A very severe drought, at the commencement of harvesting seriously affected the crops. No doubt the results could have been more clearly demonstrated had the thinned trees received more drastic treatment, but the drought could not be foreseen.

Fruit Size.—The results are detailed in the above table, and it can be seen that whilst there is some variation between the rows the fruit from thinned trees was invariably larger, a difference in favor of the thinned fruit of .12 ozs. each, over the whole area being registered.

Plot B shows out more favorably in average size, both in the thinned and unthinned trees, than Plot C, and it is perhaps of interest to note that the former had received a spring dressing a the rate of 1 cwt. sulphate of ammonia per acre. The thinned trees in Plot C, however, appear to have responded somewhat better as regards increased size, but this is doubtless due to the small average size of the fruit from the corresponding unthinned trees.

Growth.—With regard to foliage and growth, practically no difference was noticed between the thinned and unthinned trees, and probably several season's work would be required to study this factor. There can be little doubt, however, that growth was generally lighter this year than last when the crop was smaller and trees making more vigorous growth.

Vigor and Thinning.—Perhaps the most striking point brought out in the experiment was the close relation between growth and foliage, and size of fruits. The importance of studying the health and vigor of the tree before thinning the fruit can hardly be stressed too much, and it is evident that to obtain the maximum benefits from thinning, each tree should be taken as an individual and the severity of the thinning be regulated according to the crop carried, and in addition, to the general growth of the previous season.

To illustrate the above, one or two instances might be worth quoting from an unthinned series of 20 trees—Tree No. 11, Plot 1, produced 2,154 Apricots, with an average weight of 1.43 ozs. per fruit (over 1¾in.), whilst an apparently comparable tree, No. 7 of the same plot, and producing the same number of fruits, only averaged 1 oz. per fruit. A closer comparison of the two trees showed that No. 7, although similar in size, was making considerably less foliage and growth. To have brought the Apricots on No. 7 up to size, probably 50 per cent. of them should have been removed, whereas on the figures recorded, No. 11 could have carried even more Apricots, without reducing the desired marketable sizes. Trees Nos. 18 and 20, also apparently comparable trees as regards size, etc., to the ones already mentioned, bore only 1,500 Apricots each and averaged 1.07 ozs., little more than the average weight of Apricots from tree No. 7, a 2,000 Apricot tree.

Many other such examples could be quoted, but the foregoing will probably suffice to emphasise the importance of this point.

Thinning, in addition to increasing size, appears to forward the ripening period of the remaining Apricots, and in the present experiment this amounted to, from 7-10 days. The explanation is doubtless similar to that which accounts for the same occurrence in light bearing trees—viz., that only fruits in the most favored situations are left, and these, owing to the favorable conditions, develop rapidly and reach maturity at an early stage.

Some further work will be carried out on thinning if the crop is reasonably heavy, this coming season, and the severity as previously suggested will be regulated according to the trees' behaviour in the past season.

The work discussed above was made possible by the kind assistance of Mr. E. Shoobridge, of Bridgewater, in co-operation with the horticultural officers of the Department of Agriculture.

TASMANIA.

Much interest was aroused in Tasmania by the evidence tendered before the Royal Commission in Tasmania, which is sifting several important matters connected with the export of fruit.

* * *

At the meeting of the Tasmanian State Fruit Advisory Board, held on October 28, it was decided to obtain evidence to place before the Sugar Enquiry Committee. Growers of small fruits were threatened with ruin. Factories were not buying fruit, on account of the high price of sugar.

SOUTH AUSTRALIAN FRUIT-GROWERS AND MARKET GARDENERS' ASSOCIATION.

Annual Meeting.

Sugar Embargo Opposed. Local and Interstate Marketing.

THE ANNUAL MEETING of the South Australian Fruit-growers and Market Gardeners' Association was held at Adelaide at the end of September, the president (Mr. W. H. Ind) being in the chair.

Mr. F. C. Staniford, M.P., who performed the opening ceremony, congratulated the association on the good work accomplished, and on the largely increased membership. The success already attained should spur members on to still greater co-operative effort.

Annual Report.—In presenting the annual report, the president (Mr. W. H. Ind) stated:—

In reviewing the past year's work of our association, I feel that members have reason to feel satisfied with the progress made, especially taking into consideration the adverse conditions, caused by the widespread trade depression, and the extremely dry period of the first nine months.

At the time of holding our last conference, we had 394 paid members. At the present time our membership is nearly 600, 522 being paid up, 84 new members having joined during the year. We began the year with a slight debit balance, but I am pleased to report that our balance sheet to-day shows a credit of £86/4/8. When we remember that only a few years ago the secretary of the association was able to attend to the duties of his office in his spare moments, and that to-day we have a full-time secretary, for whom your executive have had to make arrangements for a certain amount of assistance, besides which we have Mr. McRostie stationed in Melbourne to superintend the sale of the produce exported to that city by our members, I think you will agree that our association has made very satisfactory progress; and the fact that we are recognised as a live body is, I think, proved by the communications received from time to time from kindred associations in the other States.

Your officers were recently very sorry to learn that Mr. McRostie was in hospital with a severe attack of pneumonia, but I am pleased to report that he is with us today, and will address you later on.

I have to report that, up to date, the levy of ½d. per half-case for tomatoes, and 2d. per crate for celery, has been found sufficient to pay Mr. McRostie's salary and incidental expenses, and members have every reason to be well satisfied that they have such an energetic and capable officer to watch their interests. Your executive also arranged for Mr. McRostie to represent us at the conference of fruit-growers held in Melbourne to consider representation on the sugar enquiry board, and it was with much regret that we learned that our nominee, Mr. Boardman, had not been elected by the Federal Government. When the names of the members of the board were published, we, in conjunction with S.A.F.M.A., wired the Acting Prime Minister, requesting that Mr. Boardman's name be added, but the reply we received stated that the Federal Government could not accede to our request, on account of the extra expense that would be incurred.

The executive meetings have been well attended, and the members take a keen interest in all business transacted.

At our last conference, a motion was carried, asking that the restrictions of the Codlin Moth Act be enforced. This was passed on to the Minister, but I am not aware if it has been carried out.

I sincerely thank the members of the executive and the secretary for the able assistance they have given me during my term of office.

In conclusion, I wish to express my deep appreciation of the very able and efficient manner in which our secretary has carried out all duties appertaining to his office.

The secretary (Mr. W. J. Kimber) expressed pleasure at the large increase in membership, principally from among the ranks of the tomato and celery growers. Celery growers had adopted the similar system of marketing which had proved successful with tomatoes, and 38,000 crates of celery had been sent to Melbourne, where Mr. McRostie had supervised the marketing.

The balance sheet showed a marked improvement and a satisfactory balance.

Hobart Conference.—Appreciation was expressed regarding the services of the association's delegates, Messrs. Giles and Parsons. Eight other fruit-growers had also attended the Hobart Conference.

Election of Officers.—Office-bearers were elected as follows:—President, Mr. W. H. Ind; vice-president, Mr. G. Jennings; secretary, Mr. W. J. Kimber; members of committee, Messrs. L. J. Wicks, J. Turner, G. W. Summers, J. Donaldson, C. H. Ragless, A. O. Petersen, J. B. Randell, R. Hunter, M.P.; F. C. Staniford, M.P.; and C. W. Giles.

Anzac Day Observance.—A resolution was carried unanimously in favor of Anzac Day being observed on the Sunday nearest to April 25, as befitting the commemorating of that solemn occasion, and it was further decided to co-operate with the Sailors and Soldiers' League and the general public in securing the necessary legislation.

Sugar Embargo.—Mr. C. W. Giles moved:—"That this association, considering the damaging effect of the high price of sugar on the fruit-growing industry, believes that definite action should be taken by the Federal Government to reduce the price."

Mr. Giles spoke in strong terms at the unfairness of one State having control of sugar, and being able to control sugar at such a price as to practically ruin the jam and canning fruit-growing industry. In addition, the cost to the people of Australia was an enormous burden, and the jam-eating habit was diminishing to an alarming extent. Australian sugar should be, and certainly could be, sold at a lower and yet still a payable price. The profits made by the Refining Company were far too great, and the burden of high price was now an intolerable and unjust one. Mr. Giles quoted many facts and figures in support of the proposition.

Mr. C. W. McRostie, the association's representative in Melbourne, supported the resolution, and told of the activities in Victoria in opposition to the sugar embargo.

The motion was carried unanimously. It was decided to forward same to the representative of the fruit-growers on the Sugar Enquiry Committee.

Marketing Improvements.—Mr. W. J. Bishop Leaswood read a paper on "Suggestions for Improving Fruit Marketing Methods," and was cordially thanked.

Votes of Thanks.—The office-bearers were accorded a hearty vote of thanks for their efficient services during the past year.

Apple Packing Medal.—Mr. Staniford, M.P., presented to Mr. Young the gold medal he had won at the Royal Show for apple packing.

SOUTH AUSTRALIA.

Prospects for the coming crops are given hereunder by Mr. H. N. Wicks, of Balhannah, South Australia:—

Apples.—Early varieties medium to very light; late varieties very poor in most instances.

Pears.—Medium; heavy in some places.

Plums and Prunes.—Heavy with me, but do not know what general crop will be. Ashton growers report light to total failure (about 10 miles from here).

Apple shipments will not, in my opinion, exceed more than a fraction of last season's output.

Season opening well with good, useful rains for orchard and nursery work. Nursery stock getting away well, and looks extremely promising for an excellent growing year.

Marion.—At the monthly meeting of the Marion Branch of the South Australian Fruit-growers and Market Gardeners' Association, to be held on November 4, reports will be tendered regarding tomatoes on Interstate markets. Consideration will also be given to the Primary Produce Marketing Act.

Verdun (30/10/30).—Mr. A. W. Mack reports as follows:—It is early yet to estimate the fruit crops for the coming season, but should be as follows:—Apples, setting light to medium; pears, good to heavy; plums, medium. Thrips have been active, causing poor setting in some varieties; all fruit showing clear, so far.

Basket Range (31/10/30).—Our main crop is cherries, of a quality, we claim, unexcelled in Australia. The crop this year is inclined to be patchy, and will total, I think, about 75 per cent. of last year's, which was a full crop. The three previous summers have all been under the average, as regards rainfall, and, I think, those conditions are responsible for the falling off in the crop. The sample should be excellent, and, with the economic position as it is, the smaller quantity may prove a blessing in disguise.

Apples are light. Following the heavy crop of last season, the showing of bloom was surprisingly good, but they failed to set in any quantity. Thrips were in evidence in the later blossoms.

Plums are medium, and there may be a factory demand for them, as I believe the unemployed have consumed most of the plum jam in stock.

Strawberries, with a continuance of the present weather conditions, should show an increase on the last two seasons. Loganberries and raspberries are promising well.

Besides the fruits mentioned, our district produces in commercial quantities pears, quinces, peaches, nectarines, apricots, oranges, lemons, persimmons, passion-fruit, walnuts, black and red currants and gooseberries. It is also the main source of supply of rhubarb, of which hundreds of tons are marketed annually.

W. J. BISHOP.

LEGISLATION IN SOUTH AUSTRALIA.

A Primary Products Marketing Bill is now before the South Australian Parliament. This is on the same lines as the Bill which was recently before the Victorian Parliament, but which was rejected by the Legislative Council.

A deputation from the Murray Citrus Association recently waited on members of the Legislative Council, urging that the measure be made law.

THE SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

The monthly meeting of the Executive Committee of the South Australian Fruit Marketing Association was held on September 26, 1930, and there was a satisfactory attendance.

Pear Shipments.—Advice was received from the shipping companies in regard to sailings for the coming season and insulated space available for pear shipments, and it was resolved to defer definite arrangements in regard to pear shipments until the next meeting, as it was extremely difficult at the moment to ascertain the probable quantity of fruit available for export.

Improvement in Pack.—Several delegates mentioned the very complimentary reports that were being received from overseas in regard to the great improvement in the general condition of the pack of South Australian fruit for the past season. It compared very favorably indeed with fruit from other States, and it was gratifying to the association to hear that its work in connection with improving packing methods has had such excellent results.

WESTERN AUSTRALIAN APPLES.

Several Australians, who recently returned from visiting the United Kingdom and the Continent, have spoken in terms of high praise regarding Western Australian fruit on overseas markets. This fruit, it was stated, was well appreciated by the trade and the buyers.

The fruit was of good quality, well graded and packed, and the red jarrah cases added distintiveness.

The Fruit-fly Menace.

Mr. A. Mayor, Spearwood, W.A., writes (18/8/30):—

I would like to express appreciation of the "Fruit World," and also to comment briefly upon a statement made by an officer of the Department of Agriculture at a conference of fruitgrowers held in N.S.W. recently, and reported in the "Fruit World" to the effect that "the fruit fly was not the menace to fruitgrowers it was supposed to be."

If the fruit-fly in N.S.W. is similar to the fruit-fly which causes such loss to the fruitgrowers of W.A., then it would be wise for the officer concerned to consider the steps which are being taken by our American cousins to wipe out the pest which has made its appearance in Florida. It is better to err on the side of excessive caution than to adopt a policy of indifference towards our enemy the Mediterranean fruit-fly.

In a report by the Western Australian Department of Agriculture, attention is drawn to the need for prompt action to be taken by growers in order to combat the fruit fly. Last season there was a severe outbreak of the fruit fly owing to growers being careless of their large amount of unmarketable fruit. To keep a hold on this pest there should be co-operative baiting, trapping and daily destruction of infested fruit.

A further luring test has been made with "Clensel," which has proved effective. Growers are advised to place traps of "Clensel" in Loquats, citrus and other fruit trees coming into flower and foliage. Hang glass jars or tins of a capacity of ½ pint in the trees. Use at least two traps per tree. These should be hung in a sunny aspect until mid-October, and later hung in the shade. The traps should be half filled and renewed every eight to ten days.

Thrips have appeared at Mt. Barker and Bridgetown, and instead of anticipated heavy yields, the Apple crops will be light.

New South Wales.

N.S.W. FRUIT-GROWERS' FEDERATION.

A meeting of the Board of the Fruit-growers' Federation of New South Wales was held at Sydney on October 3. There were present:—General J. Heane (in the chair), Messrs. H. G. Such (Griffith), F. D. Inman (Leeton), A. E. Herring (Batlow), A. U. Tonking (Orange), W. J. L. Nancarrow (Orange), Bert Moore (Gosford), R. Hill (Narara), Alex. Smith, Junr. (Freeman's Reach), W. W. Challis (Kentucky), A. J. Taylor (Singleton), P. C. Macdermott (market representative) and E. E. Herrod (secretary).

Mr. C. G. Savage (Director of Fruit Culture) was in attendance. Mr. R. J. Benton (Department of Agriculture) and Mr. H. S. Robinson attended during the discussion on "Black Spot" and Dry Mandarins.

"Black Spot."—Mr. H. S. Robinson said that the position, particularly in the Central Coast District, was serious in respect to Valencias, the loss on some orchards being from 60 to 90 per cent. of the whole of the crop in 1928. The present conditions favored the development of "Black Spot" this year, and the position was so serious as to render it absolutely essential for everything possible being done, and suggested that outside assistance be obtained to collaborate with the departmental officers now investigating the disease.

Mr. Savage stated that everything possible was being done by the Biological Branch of the department, and doubted very much whether any advantage would be gained at present by the adoption of Mr. Robinson's suggestion.

It was decided, after discussion, to ask the department to make periodical reports to the Federation of the experiments being carried out in regard to "Black Spot."

Dry Mandarins.—The question of the institution of regulations guarding against the marketing of dry mandarins was considered, and Mr. Savage exhibited to the meeting a number of samples of mandarins of varying degrees of dryness, and it was decided to recommend a minimum of 20 per cent. of juice.

Marketing of Citrus in Canada.—Mr. Such reported particulars relating to the shipment of 40,000 bushels of oranges to Canada this year. Shipments were sent monthly, by the Wholesale Distributors' Association, from June to October, inclusive. Reports of the fruit sold to date indicate that the oranges were very favorably received, and that the prospects for developing a large export trade to Canada in future years are very hopeful.

Codlin Moth Regulations.—Attention was directed to amended regulations dealing with codlin moth control, under which the compulsory bandaging provisions have been deleted. Mr. Savage reported that, as bandaging had proved so beneficial in many districts, the Department of Agriculture is issuing a leaflet, which will be distributed to growers through orchard inspectors, containing valuable suggestions for the better control of codlin moth.

Fruit Cases—Not to Size.—As complaints have been received of fruit cases not being up to the required measurements, and also of the inferior type of case being turned out from some factories, it was decided to approach the case-makers to have the matter rectified.

Ohanez Grapes.—The Producers' Co-op. Distributing Society drew attention to the differences in measurement of cases in which Ohanez Grapes are exported, and requested that an endeavor should be made to induce Victoria to adopt the same case as New South Wales.

Secondhand Cases.—The secretary reported that concession on the return of empty fruit cases had been given by the Railway Department since the last Conference. This provides for a sufficient number of empty secondhand cases being returned to the grower under the Empty Cases Return Rates, as long as a number of these, plus the growers' own cases, do not exceed the number of cases sent full by rail by the grower. This allows for the replacement of the cases which may be sold with the fruit.

Health Week.—Decided to co-operate with the Health Week Executive to the extent of rendering some assistance in the preparation of the Health Week booklet.

Railway Matters.—The Railway Department advised that it had been decided, following the representations made by the last Conference, to increase the present rate of 40 to the ton to 42 cases to the ton.

Keeping Qualities of Citrus.—With a view to taking more active steps to ensure a full supply of citrus being available for marketing throughout the year, extensive experiments are being conducted at the Gosford District Citrus Packing House, and the Board decided to assist the experiments by instituting a system under which those supplying the fruit would be guaranteed against loss that may be incurred in conducting the experiments.

N.S.W. Crop Reports.

Crop prospects for New South Wales, as at October 23rd, are set out by the Director of Fruit Culture, Mr. C. G. Savage as follows:—

CITRUS:

Washington Naval Oranges.—Flowering on the whole has been good, and the conditions at the present time indicate that the crop will be heavy.

Late Valencia.—Indications in the coastal district are that the crop will be heavy, but in the inland districts flowering has been somewhat erratic, and it is anticipated that in these areas the crop, on the whole, will be light.

Common Oranges.—Fair prospects.

Lemons.—Good crops anticipated.

Mandarins.—Mostly light.

Grape Fruit.—Very fair to good.

POME FRUITS:

Pears.—Fair to good.

Apples.—Are somewhat patchy. It is not anticipated that the crops will be more than about 75 per cent. of last year.

STONE FRUIT:

Apricots.—Very fair to medium. Crops are much lighter on the whole than last season.

Cherries.—Very fair.

Peaches.—Fair to heavy. Canning varieties are promising fairly well.

Plums and Prunes.—Indications are that crops will be from medium to good.

MR. H. BROADFOOT RETURNS.

Mr. H. Broadfoot, Senior Fruit Instructor of N.S.W. Department of Agriculture, returned to Australia by the s.s. Port Adelaide in mid October. He expresses the view that, with an organisation representing the whole of the fruit-exporting States having a direct representative in England, much better results would be obtained for Australian fruit-growers.

CHERRIES IN NEW SOUTH WALES.

It is expected there will be a very heavy crop of cherries in the New England district of New South Wales, and it is thought that about 30,000 cases will be put on the market during November and December. An advertising campaign in Queensland, principally at Brisbane, has been decided on by the New England Fruit-growers' Association.

N.S.W. Oranges in Canada.—The N.S.W. Central Citrus Association has received a report from Mr. L. R. McGregor, Australian Trade Commissioner in Canada, indicating that encouraging prices were received at Toronto for the shipment of navel oranges from Sydney. Mr. McGregor recommends the sending of heavy consignments next season, and a continuity of supplies from year to year.

Passion Fruit Products.—An order for a substantial quantity of passion fruit drink has been received by a firm in Sydney. This order came from New Zealand. Repeat orders have been received from the United States, and interest is being displayed in the product by a number of overseas companies.

Batlow.

The Batlow Packing House and Cool Stores Rural Co-operative Society Ltd., Batlow (H. V. Smith, General Manager), reports fruit prospects for the coming season as follows:—

Apples.—Granny Smiths, 20 per cent. under normal; Jonathans, normal; London Pippins, normal; other varieties, 10 per cent. under normal.

Pears.—All varieties full normal crop.

Plums.—Full normal crop.

Cherries.—Uncertain.

Mr. A. E. Herring summarises the prospects at Batlow thus:—Apples, fair to good; Pears, heavy.

Total production about the same as last crop.

Murrumbidgee Irrigation Areas.

Apricots will probably be a light crop. Peaches heavy.

GATHERING ORANGES.

Pulling or Clipping?

We noticed reports recently regarding the harvesting of oranges in Australia. It was stated that oranges were "pulled."

In California and many other places the oranges are clipped from the trees.

In many Australian citrus groves, oranges are now clipped, not pulled. It is to be hoped that this up-to-date practice will soon be completely adopted throughout the Commonwealth.

PERSONAL.

Mr. R. G. Hatton, M.A., in charge of the East Malling Research Station, is visiting Australia about December. Mr. Hatton has been eminently successful in his investigations of fruit stocks. From the East Malling Research Station fruit tree stocks of tested quality are supplied to British nurserymen for the working of fruit trees for fruit-growers.

Mr. C. M. Griffeth, Two Bays' Nurseries and Orchard Co., was recently elected growers' vice-president at the Victorian Fruit-Marketing Association.

Mr. W. Young, representative of the fruitgrowers on the Sugar Enquiry Committee, is having a busy time. The enquiry looks like lasting very much longer than was at first anticipated.

Mr. D. G. Wills, representative in Sydney of the Northern Victoria Fruitgrowers' Association and other growers' associations, is leaving Sydney for a visit to Victoria early in November.

Mrs. Everard, wife of Mr. W. H. Everard, is recovering nicely after her recent illness.

Mr. and Mrs. J. L. Tuckfield (Lightning Fruit Graders) left on a visit to Western Australia early in October.

Miss Dorothy Parnham was recently selected as the most beautiful girl to be Queen of Flowers at the Floral Carnival and Battle of Flowers on Hospital Saturday, October 25, at Melbourne. Miss Parnham is the daughter of Mr. and Mrs. C. J. Parnham, of Mentone. Mr. Parnham is a well-known fruit exporter.

U.S.A. Apple Crop

About the Same as Last Year.

OFFICIAL ADVICES are to hand from the U.S.A. Department of Agriculture regarding the 1930 crops, as follows:—

According to August condition, the apple crop this year may be only a little larger than the short crop of 1929. The forecast indicates total production of 146,440,000 bushels and a commercial crop of 30,722,000 barrels. [Calculate three bushels to the barrel.—Ed. F.W.]. This is a slight improvement over the preceding month's forecast, but still below the five-year average figure.

As a general rule, commercial apples in Eastern States exceed by about 40 per cent. the commercial crop in western-producing sections. Last year, eastern areas had 15,653,000 barrels, or 17 per cent. more than the west. This season, the eastern commercial crop is forecast at 15,658,000, and the western crop at 15,064,000 barrels, making the market fruit about equally divided between the two parts of the country. The generally light production this year may result in a larger proportion of the crop moving into commercial channels than ordinarily.

Sections most seriously affected by the drought and heat were the Cumberland-Shenandoah region and the Ohio Valley. The Pacific Coast States all look for good-sized crops.

An exceptionally clean and good crop is expected in Oregon, and the Washington apple situation is very encouraging. Idaho fruit was doing well, and the season there may be two weeks earlier than last year. Commercial production in Idaho is expected to be about one-fourth less than the very heavy crop of 1929. The situation in California was satisfactory. A good crop of high-quality Gravensteins was marketed.

That the sugar agreement is costing Tasmania £1,000 a day was stated by the Chairman (Mr. B. J. Pearsall, M.H.A.), at the recent Annual Conference of Fruitgrowers in Hobart.

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Good offices are only good business. They attract trade, increase prestige, and profit, and bring greater efficiency from workers.

Australian Fruit Abroad.

SUGGESTIONS FROM AN EXPORTER.

MANY IMPROVEMENTS NEEDED AT THIS END.

Mr. Chas. J. Parnham (Parnham Pty. Ltd.), Fruit Exporters of Melbourne (representing White and Son Ltd., the White Service of Great Britain, also J. H. Lutten and Son, Hamburg), who has just returned from a visit to Great Britain and the Continent, was recently interviewed, when he gave an interesting summary of his impressions. Mr. Parnham makes it clear that these remarks apply not simply to any one State, but to Australia as a whole:—

"I am not concerned about the London, Liverpool, Hull and Hamburg end of the business," states Mr. Parnham. "The method of receiving, handling, sampling and selling of the fruit by public auction is as near perfect as human organisation can make it. The utmost fairness is insisted upon for the protection of buyer and consignor alike, and the fruit is sold absolutely on its merits. What we have to do is to **put our own house in order**, and to this end I would make a few practical suggestions, which I feel sure, if acted upon, would give overseas buyers increased confidence in our fruit.

"(1) Continuity of brands.
"(2) Endeavour to eliminate F.O.B. sales.
"(3) Limit the number of receivers.
"(4) Narrow the channels of distribution.
"(5) Cut out entirely certain unsuitable varieties.
"(6) Adopt the Canadian type case.
"(7) Refrain from shipping plain-grade fruit under present regulations.
"(8) Endeavour to color grade to utmost limit.
"(9) Ship only variety and size as required by the various overseas markets.
"(10) Generally to put up our fruit as show fruit.

"Now, then, as regards No. 1,—Continuity of Brands.—I feel it imperative that growers should voluntarily decide to export a percentage of their crop yearly, irrespective of local and other conditions. The continuity of a brand is essential to its success. Take, for instance, the Big Apple brand, packed by Mr. R. E. Fowler, of Pomonal. This brand, although new on the market, is asked for everywhere, but what would happen if, in a short season locally, Mr. Fowler were to refrain from export? Without doubt, the popularity of this brand would fade. So that, I say, it is imperative for the good of the industry that growers, having the right varieties, export regularly a percentage year in and year out.

"(2) Eliminate F.O.B. Sales.—What a pity all our fruit could not be sold outright on an F.O.B. basis. I am in favor of this, but since I desire the impossible, I say emphatically that the practice of selling a portion of our fruit F.O.B., and forwarding the balance on consignment does not make for the stabilising of the market. Readers will readily understand why.

"(3) Limiting the Number of Receivers.—In my opinion there are far too many direct receivers of our fruit at the present time. Competition in the sales room is reduced, and, on a falling market, the small direct receiver is a positive curse to the trade. Send the fruit only to brokers in Spitalfields markets, and to reputable firms in Covent Garden, and see the result. This applies also to the auction brokers at Liverpool, Hull and Hamburg. On a good market, competition to secure our apples will be keen, and on a dull or falling market the brokers will know how to act, providing they are in charge of the position, but the key of this is taken from their possession when fruit is consigned or sold F.O.B. to all and sundry.

"(4) Narrow the Channels of Distribution.—I am going to ask for trouble when I say that, instead of finding new markets, let us build on those we already have. We don't want new markets until such time as we have thoroughly exploited the ones we already have. This we have not done, as there is practically no limit to the Home and Continental markets for "first-class" fruit. Some of the markets lately "found" can, with advantage, be dropped. In my opinion, I would at present confine our operations to London (Spitalfields and Covent Garden), Liverpool, Glasgow, Hull, Hamburg and Copenhagen. I have included Covent Garden, although I strongly recommend "sales by auction" to the fruitgrowers. We want to get the buyers together in a common sales room, and we could do this if shippers would refrain from forwarding consignments direct to ports, some of which are only a few hours from main auctioning centres.

"(5) The elimination of certain unsuitable varieties are most desirable. These varieties certainly sell, but at the expense of the better and well-known sorts. Delicious, for instance, sell well in Victoria, but the sooner growers cease to export them the better for themselves. Hoover is another, and there are many others.

"(6) Canadian Case.—My enquiries from merchants and retailers leave no room for doubt as to the type of case preferred, and we should do well to give the buyer our fruit packed in the manner he prefers.

"(7) 'Plain' grade fruit, under present regulations, leaves too much to the judgment of the grower, and, unfortunately, fruit has gone forward under "plain" grade that really was a disgrace to the name of Australia. I believe we must have two grades, but the difference between "Standard" and "Plain," as at present allowed, is too great, and calls for immediate amendment of this regulation.

"(8) Color grading is difficult, but not so difficult to prevent packers from packing red and green apples in the same case. If the grower wants the best price for his fruit, he must see to it that red apples are packed in one case and green in another, and the packages stencilled accordingly.

"(9) Varieties for Various Markets.—This is most important. When growers are reserving space with their agents, they should enquire which varieties and sizes that particular market appreciates. For instance, some agents forwarded last season to Glasgow 2 and 2⅛ fruit, when the smallest size they prefer is 2⅜in. What was the result? Loss and disappointment to receiver and consignor. The forwarding of consignments to the various markets wants to be intelligently handled, and the shipping of just "apples" must cease.

"To conclude, I would say that the fruitgrowers of Australia can look forward with the utmost confidence to receiving **splendidly payable** prices for their fruit providing the right fruit is placed in the right market with the right people."

Mr. Parnham secured much additional detailed information, and would be glad to answer any enquiries sent to him direct.

Dried Fruit Notes.

A.D.F.A. Federal Council Meets.

Empire Preference Reciprocity.

THE annual meeting of the Federal Council of the Australian Dried Fruits Association, held in Melbourne on October 29, was attended by delegates from Victoria, New South Wales and South Australia. Mr. A. L. Johnstone presided.

An explanation by the chairman of the board of management (Mr. H. D. Howie) of the terms of agreement with the New South Wales Control Board was endorsed by the conference.

A sub-committee was appointed to report on a remit from the Victorian conference, and to give careful consideration to the financial statements of the association, with the object of suggesting measures of economy.

A proposal to appoint one control board, with one general manager, was discussed. It was stated that the matter was under consideration. Though regarded as capable of adoption, the difficulty of making a change at the present moment was thought to be too great to warrant early action.

Senator R. D. Elliott addressed the conference on the subject of Imperial reciprocal trade, and its potential value to the United Kingdom and the Dominions. A resolution favoring Empire trade was carried.

FUTURE MEETINGS.—It was decided that future Federal Council meetings take place on or about the middle of October each year, in Melbourne.

SALES IN GREAT BRITAIN.

THE Commonwealth Dried Fruits Control Board has been advised by its agency in London that 1,144 tons of Australian Dried Fruits were sold in the British market during the week ending 23rd October. This represented a total value of £47,950.

The market showed great interest in Sultanas, 981 tons being sold at an average of £43 per ton, while for 129 tons of Currants an average price of £35/3/4 was realised.

Shipments to date to British ports show a total of 41,690 tons, as compared with 46,030 tons last year. The despatch of Currants is practically complete for the season and totals 12,837 tons.

MELBOURNE ROYAL SHOW.

Dried Fruits.

The Irymple Packing Pty. Ltd., won the prizes for Collection of Sultanas, Currants and Lexias, Raisins, Sultanas and Currants; dried Peaches, Nectarines, Pears, Apricots and Prunes.

Prizes for nuts were won by C. J. Monaghan.

TRADE CONVENTION AT HONOLULU.

Plans are in hand for the holding of the Pacific Foreign Trade Convention at Honolulu in October, 1931. In this connection, Mr. Riley H. Allen, editor and manager of the "Honolulu Star-Bulletin," visited the U.S. Pacific coast recently and secured the interest and support of the various Chambers of Commerce and civic associations. While there, Mr. Allen renewed his acquaintance with Mr. A. H. O'Connor, representative in U.S.A. for the Australian National Travel Association.

It is hoped that there will be a good delegation from Australia and New Zealand to attend this projected trade convention.

Canned Fruits.

CRUSHED PEACHES POPULAR IN U.S.A.

DURING the past year the Fruit Products Laboratory of the College of Agriculture of the University of California packed 600 cases of crushed peaches in experimental work with this product, in co-operation with the California Canning Peach Growers and some California canners. The new product has been placed on sale in grocery stores in the San Francisco Bay district, and in a number of cities throughout the central part of California, in order to determine the opinion of consumers.

It has also been demonstrated in stores in several Eastern cities. The response of the public is reported to have been very favourable, and repeat orders are frequent, indicating that this new product promises to become popular. Crushed peaches are prepared from well-ripened, peeled and pitted cling peaches, by grinding coarsely, heating to boiling, with a moderate amount of sugar, canning hot and sterilising in the sealed cans in the same manner as halved peaches. Existing cannery equipment is used in the preparation and canning, making the process easily conducted and inexpensive.

Unsweetened crushed peaches were packed in large cans for experimental use by bakers, ice cream manufacturers, and confectioners, by the Fruit Products Laboratory of the University of California.

The University's specialists believe that crushed peaches, properly introduced by sustained advertising, would make use of much of the annual surplus of canning peaches. Plans are being made to increase the experimental pack. The investigations are under the general direction of Professor W. V. Cruess, of the Fruit Products Laboratory. —"South African Fruit Exporter."

QUEENSLAND CANNED PINEAPPLES.

The Queensland pineapple crop has been exceptionally good this season. It is hoped that the 7050 cases of canned pineapples which were sent from Queensland to Canada will be the beginning of a regular trade in this line.

UTILISING WASTE FRUITS.

In the fruit and canning industry the wastes and culls now take a heavy toll. The California Citrus Fruitgrowers, in co-operation with the U.S.A. Bureau of Chemistry and Soils, have solved the problem of utilising citrus culls and wastes from which Lemon oil, Orange oil, citric acid, pectin, Orange juice, and cattle feed, etc., being produced, returning to the growers from £2/10/- to £3 a ton. There are possibilities for making use of certain Illinois waste fruits through the application of chemical science.

By a process of fermentation the Bureau of Chemistry and Soils recently has been able to produce gluconic acid from glucose, a process which lends itself to commercial practice. Since the calcium salt of gluconic acid is readily absorbed by the tissues, thus raising the calcium content of the blood, it undoubtedly will not only have an important place in medicine, but also may become a valuable constituent of livestock feed, opening up a new use for glucose which is made from corn.

A Letter to John Smith, Orchardist, on the subject of Manuring.

Dear John,—

With the sudden fall in the return for wool and wheat last year, your position, which has been growing steadily worse for a number of years, has been somewhat overshadowed. And yet, with 150,000—200,000 acres under full-bearing trees, and many thousands of acres more which would grow the finest fruit procurable anywhere in the world, your industry cannot be considered of anything but primary importance. With a perishable article, your marketing limitations are necessarily much greater than those of most of the other exported primary products. Still, John, you know there ARE growers of each and every kind of fruit, who, even to-day, are not only optimistic, but who make orcharding pay—no, not only citrus growers, but apple, vine, stone and berry, too—although I will grant you that this year they would be difficult to find, where vines and stone fruits were concerned, chiefly because individuality is, to a certain extent, lost in the processing.

The main secrets of success with these growers are three in number, namely:—

(1) MORE FRUIT OFF EACH ACRE.

(2) LOWEST POSSIBLE COST OF PRODUCTION.

(3) BETTER MARKETING.

By a united effort, you and your fellow-growers can bring about a lowering of the cost of production, and better marketing all round, so that all of you might share two of these secrets of success. But the other remaining secret, John, namely, producing more fruit off each acre, rests almost entirely with the individual, and that fact helps to answer the question which I know has been on the tip of your tongue to ask since I began this last paragraph. "What would happen to the industry if EVERYBODY produced more per acre?" Unfortunately there are a great many growers who will NEVER grow more per acre, and you can prophesy what will happen to them. But, on the other hand, there are many who only need a period of depression like the present, to stimulate them into activity, when they CAN and WILL produce just as much and more than the few who have held this little secret for so long. It is going to be a survival of the fittest, John.—See that you remain amongst the fit.

The Importance of Manuring.

There are several matters requiring attention, where increased production per acre is concerned, and I think you know them all. **MANURING is, perhaps, the most important,** and now I want to write to you on this subject. First of all, I want to again express sympathy for your industry, in that probably less of a definite nature is known about manuring Fruit Trees than any other crop. Perhaps you have already come to the conclusion that if you tried to follow out all the ideas on manuring about which you hear and read, you would be much in the same state of bewilderment as the man who tried all the remedies at once, which he had been given by his friends, for a cold.

Let us marshal together and review, first, the facts, then the near-facts, and then out of these let us try to evolve some system based on broad, general lines, which we can use as a basis upon which to build.

NITROGEN.

You will agree that, without growth you cannot have any increase in yield. How can you produce more fruit if you do not grow new, healthy shoots which set strong healthy buds? You must have increasing wood growth and dark green, healthy leaves. None of these are possible without nitrogen. There can be no excuse whatever for not appreciating this fact. It is one of the most fundamental and easily demonstrated facts in the science of manuring.

If you do not happen to have a tree that gets the refuse from the house or yards, then you can easily prove the fact by burying a few cats and dogs, or other animals, alongside one of your trees. Whether you bury cats, dogs, sheep, old rags, waste food, animal refuse, fowl manure, nitrate of lime, etc., the effect on that tree, which you will undoubtedly notice if you put enough, will be mainly due to nitrogen. If this doesn't convince you, here are the opinions of the leading writers on fruit culture:—

> "Nitrogen is the most important of soil nutrients to consider when fertilizing the fruit orchard. Remarkable results are secured in growth and fruitfulness from the application of nitrogenous fertilizers."—Auchter and Knapp, "Orchard and Small Fruit Culture."
>
> "With some fruits, such as Apples, the amount of growth and percentage of flowers to set fruit, will be greater if an available form of nitrogen is applied not later than 2 or 3 weeks before the time of blooming."—Chandler "Fruit Growing."
>
> "In general the tendency of nitrogen is to increase vegetative growth, promote formation of fruit buds, increase percentage of flowers, setting fruit and increase size of fruit. Much data may be presented in support of this general conclusion."—Gardner, Bradford and Hooker, "Fundamentals of Fruit Production."

"The order of importance of fertilizers, if for financial reasons the grower cannot provide all three, is NITROGEN, phosphoric acid, potash."—Frank Read, M.Ag. Sc., in an article on "Soil Fertility," in the October number of "The Fruit World."

Therefore, if you must cut down your manure expenditure, **DON'T OMIT NITROGEN.**

When, how much, and what kind of Nitrogen to Apply.

Trees take up most of their annual requirements of plant food in the first six weeks of growth. Some of this nitrogen, at least, should therefore be applied prior to the spring of growth, and it should be available nitrogen, or in such a condition that it can all be taken up in about six weeks.

But available nitrogen is soluble nitrogen, and is apt to leech away, so it is advisable not to apply it too long prior to the blossoming, when it is really needed. Again, what plant food is still required after the first six weeks of growth is probably mainly nitrogen, and as that which was applied before blossoming was calculated to last only about six weeks, good and wise manuring should include a little more after six weeks, also of an available nature. This will be during the set of fruit, and should be a factor in swelling that fruit.

You see, that by beginning with your nitrogen requirements, I am like the kind but stern parent, getting the worst (the most expensive), over first!

On your Citrus trees, which are very heavy nitrogen feeders, you will benefit by even a third application of nitrogen about December or January, whilst it has been stated that by applying a little nitrogen to Apple trees in the autumn, it may be possible to produce uniform cropping each year. Therefore, you should have at most **three** applications, and **at least one.**

Let us now consider the first and most important application. The two most available forms of nitrogen are nitrate and ammonia nitrogen. Nitrate nitrogen acts immediately and quickly, passes into the deeper layers of soil, and thus is apt to promote deeper rooting—a very desirable feature. But nitrate nitrogen is the dearer form, and is most apt to leech away. Ammonia nitrogen is the cheapest form, resists leeching to a greater extent, but is held nearer the surface and requires some little time to elapse before it is all available.

Under the circumstances, therefore, perhaps you will agree that a mixture of both these forms containing a greater proportion of the cheaper ammonia form, would be a very good suggestion. Now, as for the quantity to apply, this amount must be largely guess work, but we can be guided by the average opinions of the best growers and experimentors, and basing our suggestion on these, We submit that **about 2-cwt. of a mixture of, say, 3 parts of sulphate of ammonia to one of nitrate of lime,** or some other mixture, which contains about the same ratio of ammonia and nitrate nitrogen (the actual "filler" does not matter very much) would be very satisfactory.

For the second dressing you may choose between any of the available forms on offer, but our choice would be 2-3 lbs. per tree of nitrate of lime. For the autumn dressing, for citrus and apple trees, **2-3 lbs. of sulphate of ammonia** would be our choice. So much for the nitrogen.

Potash.

Have you ever overfed a crop of any kind with nitrogen? I don't mean killed it with an obvious overdose, but fed it so continuously that the leaves grew to an outsize, and went from a green to dark green, and even to black, and hung soft, limp and drooping. If you have not, try it on a few tomato plants (don't attempt it on a citrus or even an apple tree, because it might take much longer, and cost you a good deal more than you think). When your tomato plants begin to look like "throwing in the towel," replace the nitrogen applications with **potash dressings**, and carefully observe the gradual revival of the plant. Notice that the stems harden and stiffen, and that the leaves assume a natural and healthy green, and a firmer skin. These latter are exactly some of the most important functions of potash in plant growth. Potash and nitrogen may be called complementary factors. For every unit of nitrogen that is taken up into the tree, rest assured, John, that a unit of potash cames from somewhere, or, if there is none to come, there will soon be trouble.

Fortunately for most fruitgrowers in Victoria, there is a certain store of potash in most of the soils, which so far has been considered sufficient to balance any nitrogen that has been present. But then, John, how much nitrogen has THAT been in most cases? Make some inquiries in your district, and find out how much nitrogen has been applied per tree on the average, and I am afraid that it will not be equivalent to an average of 1 lb. of sulphate of ammonia—not enough to make much of a drain on the potash in the soil.

No one can tell you just how much available potash there IS in your soil, and if you treated your trees with an annual dressing of more than 3 lbs. of sulphate of ammonia per tree, which, as I have already stated, is to my mind necessary, if you wish to grow more per acre, then you might eventually go "from the devil to the deep, blue sea." through an insufficiency of potash in the soil. Therefore, leave no stone unturned, but apply the equivalent **of at least 1 lb. of muriate of sulphate or potash per tree, and make sure.**

Phosphates.

Now, perhaps when you conduct that little experiment with the tomato plants, you will find that though you may develop the most healthy and vigorous plants, you will get little or no blossom, and what you do get will come very late. In the event of this undesirable occurrence, treat some of the plants with some soluble phosphate, and you should then find, if you did not apply it too late, that these plants form plenty of blossom at the right time, and go on to form first-class fruit. One of the most important functions of phosphates is to assist the regenerative or reproductive functioning of plants. With an abundance of phosphate, plants will not fail to throw plenty of blossom. At what time the plant blossoms, and whether the fruit will set, depends upon the relation between the quantity of phosphate available on the one hand, and quantities of nitrogen and potash on the other. If too little nitrogen and potash, there will be early blossoming, and perhaps a poor set. If too much nitrogen and potash in proportion to phosphate, late blossoming, but perhaps a good set.

You see, John, it is all a matter of balance. Each plant food contributes its own particular share of the work. Therefore, some readily available phosphate is necessary also prior to the blossoming, say the equivalent of about two cwt. of super—a further 1-2 cwt. per acre will be applied in the autumn every alternate year when planting the cover crop.

Summary.

Now let us look at the sum total of all this advice.

Applications in lbs. per tree.

BEFORE BLOSSOMING—All Fruits.—

Nitrogen.—2 lbs of a mixture of two parts of ammonia, and one of nitrate.

Phosphates.—2 lbs. super.

Potash.—1 lb. muriate or sulphate potash.

DURING THE SET (All Fruits, if possible, Citrus certainly)—

2-3 lbs. of nitrate of lime.

AUTUMN (Citrus Fruit, and perhaps Apples, so as to help uniform cropping)—

2 lbs. of sulphate of ammonia.

1-2 lbs. of super, with green manure crop.

Naturally you will wish to make any or all of these applications in the **cheapest possible manner.** For the first recommended dressing, the cheapest sources of the plant foods mentioned can be easily learnt by consulting the Department of Agriculture list of registered manures. They are:—Ammonia nitrogen—sulphate of ammonia, £12/16/- per ton; nitrate nitrogen—nitrate of lime, £13/10/- per ton; sol. phosphate—super, £14/10/- per ton; potash—muriate of potash, £12 per ton.

And, assuming that the minimum freight rate on a ton of manure to your siding is 10/-, then the first application to 106 trees will cost you:—1½ cwt. of sulphate of ammonia, 19/-; ½ cwt. of nitrate of lime, 6/9; 2 cwt. of super, 9/-; 1 cwt. of muriate of potash, 12/-; freight on 5 cwt., at 10/- per ton, 2/6.

And, unless you choose to apply each manure separately, which would mean four separate applications, you will mix them first, or get them mixed for you by a manure mixer at a cost of, say, £1 per ton, when 5 cwt. would cost 5/-, making a total expenditure for the first application to 106 trees of £2/14/3.

But, **this is not the cheapest method**, for there happens to be a highly concentrated complete fertiliser on the market, known as **Nitrophoska No. 3**, which gives you exactly what you want in one manure, and a total weight of about 2½ lbs. instead of 5. This Nitrophoska is one of the most modern developments, resulting from one of the greatest scientific achievements of all ages—the utilisation of the vast supplies of nitrogen in the atmosphere. Nitrophoska is the most concentrated complete manure ever produced, and is revolutionising manurial practices throughout the world. It is, up to the present, made solely by one huge concern in Germany, and exported all over the world. It is welcomed and admitted free of duty into most countries of the world as being a distinct and decidedly beneficial manure, but it is burdened with a 25 per cent. duty in Australia. Still, it is the cheapest proposition for you, so you can estimate what a boon it would be if 25 per cent. cheaper still.

Its registered analysis is:—

Nitrogen, as Nitrate	4.5 per cent.
Nitrogen, as Ammonia	11.5 „ „
Total Nitrogen	16. „ „
Soluble Phosphate	16.5 „ „
Potash	21.5 „ „

And it costs £21/10/- per ton, F.O.R., Melbourne.

2½ lbs. of Nitrophoska No. 3 is exactly equivalent to:—

1.4 lbs. Sulphate of Ammonia.
0.725 lbs. Nitrate of Lime.
1.875 lbs. Super.
1.075 lbs. Muriate of Potash.
5.075

This is almost exactly the mixture recommended for the first application, as set out above.

The required quantity of Nitrophoska No. 3, namely 2½ cwt., for the first application to 106 trees will cost you on the farm and ready to apply, £2/13/9, or 6d. per tree.

The cost so far being about the same, there is the further saving in the labour of having to apply only half the quantity, to cart only half the quantity from the railhead, and then Nitrophoska is much more intimately mixed than any mechanically mixed product. So there should be no doubt as to your choice, John!

My recommendations now boil down to these:—

2½ lbs. of Nitrophoska No. 3 in the Spring.
2-3 lbs. of Nitrate of Lime during the Set.
2-3 lbs. of Sulphate of Ammonia in the Autumn.

Of course, I am aware that it is all very nice to write theoretically about manuring, but a very different matter when it comes to being able to pay for the manure. Unfortunately, this is one of the most serious economic problems Australian primary producers are up against. Still, you are, I presume, continuing to grow fruit, and therefore you are willing to spend as much as you can possibly afford. Now, in case your finance is so restricted that you cannot possibly afford to manure sufficiently just yet, I will set down what I consider to be the best order of I will set down what I consider to be the best order of choice, in case you really cannot afford all that I have recommended above:—

If nothing else:—

(1) 2-3 lbs. of sulphate of ammonia per tree in the Spring, costing about 3½ pence.

Better still:—

(2) Some nitrogen in the Spring every year and 2-3 lbs. of Nitrophoska No. 3 every second year. Costing about 6½ pence.
(3) 2-3 lbs. of Nitrophoska in the Spring and 2-3 lbs. of some nitrogenous manure, preferably nitrate of lime during the set. Costing about 9 pence.
(4) The full programme costing about one shilling per tree.

Although I claim that my recommended manurial treatment will produce profitable results in most cases, I do not claim that it should be followed literally for all classes of fruit under all conditions of soil and climate. Many citrus growers will profit by heavier nitrogen applications still, whilst growers who are able to obtain animal manure cheaply enough may not need so much inorganic nitrogen.

Of course, John, I am assuming that if you do nothing else in the way of manuring, you keep your soil "sweet" with lime, and grow cover crops at least every second year. If you don't, then I fear that you will not survive the present financial ordeal, no matter what manurial programme you adopt.

R. A. BOYLE, M.Sc., A.A.C.I.,
Manager Fertiliser Department,
Henry H. York and Co. Pty. Ltd.,
573 Lonsdale Street, Melbourne.

P.S.—The writer will welcome criticism, and looks forward eagerly to your reply, whatever it may be.

PRESENTS TO FRIENDS IN GREAT BRITAIN.

A VALUABLE OPPORTUNITY for the sending of presents to friends in Great Britain is now offered owing to the progressive action by the Victorian Department of Agriculture.

These presents could take the place of Christmas, Easter or birthday gifts. They are, in fact, suitable any time throughout the year. The produce, which can be despatched, include fruit, wine, lamb, jam and butter.

Arrangements can be made for delivery to the address given without any further expense than the amounts stated below, which cover cost, freight and delivery charges.

For Christmas, 1929, the number of gifts ordered was 1,070.

The gifts available, and prices charged, are as follow:—

10 lb. of choice butter	£0	17	6
30 lb. of assorted dried vine fruits	1	0	0
24 tins of assorted canned fruit	1	5	0
1 carcase of prime lamb	1	10	0
24 tins of assorted jam	1	12	6
24 pint bottles assorted wine	1	17	6
1 case of fresh Apples (from February to May only)	0	15	0

Orders to forward any of these to any address should be accompanied by remittances and addressed to the Director of Agriculture, Treasury Gardens, Melbourne, C.2.

Orders for gifts to residents of the Irish Free State or European countries must, in addition, be accompanied by an amount to meet any Customs duties payable.

To get something worth while well done with the greatest possible despatch and the least possible expense, is the objective of management.

* * *

If the principles of contentment are not within us, the height of station and worldly grandeur will as soon add a cubit to a man's stature, as to his happiness.

PINEAPPLE CULTURE.

Manurial Tests in Queensland.

THE Director of Fruit Culture in Queensland (Mr. George Williams) has supplied the following progress reports of some manurial trials carried out on the Pineapple experiment plot at Elimbah.

The area sown was half an acre of light loam, grey to light brown. A quarter of an acre was subsoiled with gelignite. Air-slaked lime was applied to ½ acre and pulverised lime on ½ acre in October, 1928. Maize was planted for a green crop and ploughed under in February, 1929. The final ploughing before planting the Pineapples was 9in. to 12 in. in depth. The plots were planted with Gill Sprouts at the end of March, 1929.

Paper mulch was used in three rows; fertilisers were applied to fourteen rows and two rows were untreated.

Inspection twelve months after planting showed a distinct advantage in favor of potash; in fact, the most promising row had been treated with potash sulphate only. Phosphates including bonedust showed no appreciable results. Dried blood improved the color of the foliage and to some extent stimulated growth. When associated with potash the color of the foliage was improved without appreciable increase in growth above that where potash alone was used. To the soil occupied by two rows, calcium cyanide was applied before planting with the object of destroying nematodes if present. The plants showed no benefit. Three rows planted through paper mulch did not in this particular class of soil show any resultant benefit.

The experiment is being continued.

QUEENSLAND CROP PROSPECTS.

Mr. G. Williams, Director of Fruit Culture, reports as follows, under date October 24th:—

Present appearances indicate a fair to good crop of temperate fruits, though stone fruits may be on the light side, particularly peaches and nectarines. Coastal peaches are light A few of these are already available on the local market.

A profuse flowering by citrus trees has been followed by an exceptionally heavy setting of fruit. Provided the weather continues favourable, a very heavy crop is anticipated.

Bananas are showing the benefits of humid conditions, and an improvement in the size of fruit will naturally follow. Very extensive plantings are being effected; in fact, a boom has developed in connection with banana planting, which will probably have a depressing influence for a year or two, but will ultimately benefit the industry by forcing the unsuitable lands out of cultivation. North Queensland is gradually again taking to the banana, and trial shipments in the bunch by sea have given most satisfactory results.

Pineapples promise a very heavy summer crop, the disposal of which is giving some concern. The supply of the canned product is now beyond requirements of Australian markets, and as with many other crops, oversupply or reduced prices, or both, are inevitable.

Miscellaneous fruits (mangoes, papaws, custard apples, etc.), present a good appearance, and, with the exception of the former, give good indications.

Coastal grapes carry medium crops, late frosts being responsible for a falling off from last year. In the inland districts better results are anticipated.

Tasmanian Fruit Crops.

Mr. P. H. Thomas, Chief Horticulturist, reports as follows, under date of October 28:—It is yet too early to obtain any reliable information in respect to the crop prospects.

Apples and **Pears** have blossomed satisfactorily, and, from appearances, the indications point to a better setting than was expected after last year's normal crops.

Apricots have set a medium crop, and are making satisfactory development.

Plums.—These are very patchy, and vary from light to medium in most districts.

Cherries.—Generally light. Black aphis spoiled setting on a large number of trees in southern districts.

Berry Fruits.—Indications point to satisfactory crops of berry fruits. Owing to poor demand at factories for black currants and raspberries, many growers are reducing their areas.

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Sugar Embargo Opposed.

Under the auspices of the Sugar Consumers' Association, a public meeting was held on October 22, in the Melbourne Town Hall, the Hon. F. Hagelthorn presiding.

Strong opposition to the continuance of the sugar embargo was expressed by Mrs. Thomas (Housewives' Association), Mr. Craigie, M.P. (South Australia), Mr. J. M. Fowler, Mr. E. Reseigh (Farmers' Party), Mr. T. C. Brennan and Mr. R. E. Boardman.

A resolution requesting that the sugar embargo be not renewed was carried by an overwhelming majority.

Tasmania.

At a meeting of the State Fruit Advisory Board held on October 28, a discussion occurred about the price of sugar. Several members said that the growers of small fruits in Tasmania were threatened with ruin in the coming season. Processers were unable to give an assurance that they would require fruit, as the amount of jam being manufactured was decreasing, owing to the high price that had to be paid for sugar.

It was emphasised that the consumption of jam in Australia in 1912 amounted to 86,000,000 lb., but in 1929 it amounted to only 85,000,000, notwithstanding that the population of the Commonwealth had increased by about 2,000,000 since 1912. It was decided to obtain evidence to place before the committee enquiring into the sugar industry, when it sits in Tasmania.

SOUTH AUSTRALIA.

The South Australian Fruit-growers and Market Gardeners' Association carried a resolution at its recent annual meeting, protesting against the unduly high price paid for sugar, which was ruinous to South Australian fruit-growers.

VICTORIAN FRUIT-GROWERS PREPARING EVIDENCE.

A conference of fruit-growers was recently held at Melbourne to decide on matters of procedure relative to the sugar enquiry. There were present:—Messrs. A. E. Hocking (president Cool Stores' Association), J. McDonald and S. P. Cornish (Northern Victoria Fruit-growers' Association), J. W. Aspinall (Southern Victoria Fruit-growers' Association), J. H. Lang (Harcourt), J. M. Mitchell (United Berry-growers' Association) and R. E. Boardman (Australian Conference of Fruit-growers). Mr. Hocking was elected chairman. After discussion, it was decided that each section prepare written evidence, and that a further conference be held, when the evidence would be correlated.

SUGAR ENQUIRY.

The Sugar Enquiry Committee, appointed by the Federal Government to enquire into the sugar industry, commenced work at Brisbane in mid October.

Several witnesses were examined, and the committee journeyed to the cane-growing districts to obtain first-hand evidence.

Representatives of the sugar industry, when examined, urged the continuance of the sugar embargo. They stated that sugar-growers could not produce sugar at anything lower than present fixed prices.

COLONIAL SUGAR REFINING CO.

At the half-yearly meeting of the Colonial Sugar Refining Co., held at Sydney on October 29, the chairman of directors (Mr. E. W. Knox) said the balance sheet showed a profit of £350,726 for the half-year ended September 30. Taking all factors into consideration, it was impossible to reduce the margin of profit. It was decided to pay a dividend at the rate of 10 per cent. per annum, and a bonus of 1½ per cent.

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MARKET NEWS AND PRICES

FRUIT SELLING FROM THE AGENTS' POINT OF VIEW.

Paper read before the 8th Annual State Conference of the Agricultural Bureau at Hawkesbury Agricultural College, July 24th, 1930, by F. Chilton.

MANY FRUITGROWERS and the general public are supposed to hold the opinion that the business of fruit selling on the Sydney markets is quite an easy matter, also a very profitable one for the agent concerned. I wish most emphatically to correct that opinion, and will state definitely that in far too many instances it is neither. You all no doubt know that very often the results are most unprofitable to the owner of the fruit, who generally blames the agent, while he in his turn is roundly abusing the unfortunate grower.

I would like to indicate several ways in which the business can be made more pleasant and profitable for all concerned. It is a common experience, especially during peak periods of any fruit season, to read in the daily papers of growers who have sent apparently sound, wholesome fruit to market, and have received disastrous returns.

Both statements can be quite correct, but if the matter is investigated it will be found that the fruit which has been sold so cheaply is not that which is retailed at the high price referred to. There are always—even during periods of glutted markets and low prices—some grades and some varieties which realise very fine prices, and I would like to emphasise the fact, unfortunately not well enough known by the average grower, that the demand for this class of fruit is always greater than the supply. For instance:—

In the height of last summer's glut of fruit, plums were very plentiful and cheap, as low as 2/6 and 3/- per bushel case, yet at that very time I knew a grower specialising in extra choice dessert plums who realised from 10/- to 20/- per half case for all he could supply. Even at the present time (July) when navel oranges of very fair quality can be purchased at from 6/- to 7/- per case, one brand keenly sought by buyers has not been sold under 10/- per case.

Not only is it the production of high quality fruit which is desired, but there is tremendous room for improvement generally among growers in the way in which they present even good quality fruit to the public. It is a common experience to see fruit which was undoubtedly beautiful on the tree arrive over-ripe and damaged, or perhaps, on the other hand, far too green and immature; some cases packed so tightly that the contents are seriously bruised, others only partly filled; some with big and little, ripe and green fruits, all mixed up; some fruit packed without any lining paper in old, dirty cases out of which a horse would object to eat his feed.

Putting it into something concrete, I would present the following advice:—

(1) Grow only the kinds and varieties of fruit that succeed best in your district, and keep the assortment down to the lowest practical level. Remember, straight lines in quantity are more profitable for you than mixed lots, and easier for the agent to sell. The big buyer in the fruit trade is invariably the best buyer.

(2) Endeavour to become a specialist in the production of your fruit, and not only specialise in growing it, but in picking, grading and packing in the right manner. Then select the selling agent in the market or markets you have in view who is a specialist in his job. Don't hesitate to obtain as much information and advice from him as you can; no one is better qualified to give it.

(3) Try to cater for your market's requirements. If the trade prefers, say, 2½in. and 2¾in. size apples, don't try to give it smaller or larger and expect to do well. If the trade prefers, say, oranges in new Canadian type cases with neat labels, don't try to force dump bushels or other shapes. Whatever the trade asks for is what it will pay most for. Give it what it wants.

(4) Before your crop matures, get in touch with your agent in the various markets for which you cater and let him know your prospects for quality and quantity. He may be able to secure the attention of buyers in advance. Your interests are to a large extent mutual. Good prices and quick returns for you mean good commission and satisfactory clearances for him.

(5) Don't take it for granted that standard grade fruit is good enough. My experience is that until we as a whole can produce much more of the SPECIAL or even EXTRA SPECIAL quality, we cannot hope to hold our own with our competitors overseas, or even with our Interstate neighbours, e.g., Westralian apples, Victorian pears, Stanthorpe tomatoes and peaches, Renmark navels, etc.

(6) For the better handling of your brand on the market, endeavour to adopt the NUMERICAL system of

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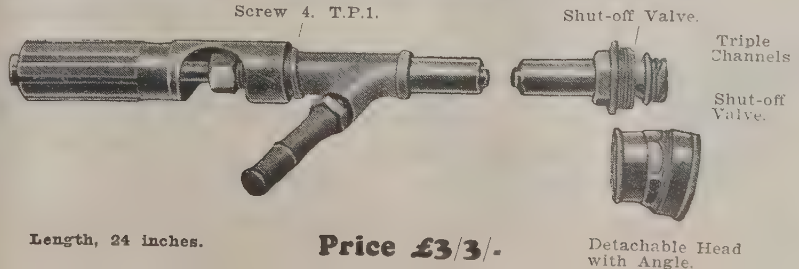
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In addition, the well-known firm of Hamburg Brokers, Aug. Stier, has also joined our Australian branch of the Organisation, having taken over the Hamburg interests of the Algemeene Vruchten Import Maatschappy, whilst the latter firm will continue to act for the Organisation in Rotterdam, Amsterdam, and Cologne, having taken over the interest hitherto held in Holland by Aug. Stier.

The old-established firm of Bristol Brokers, Messrs. C. F. Ivens & Co., has also joined our Organisation.

There is no alteration in the other markets, the complete list being as follows:—

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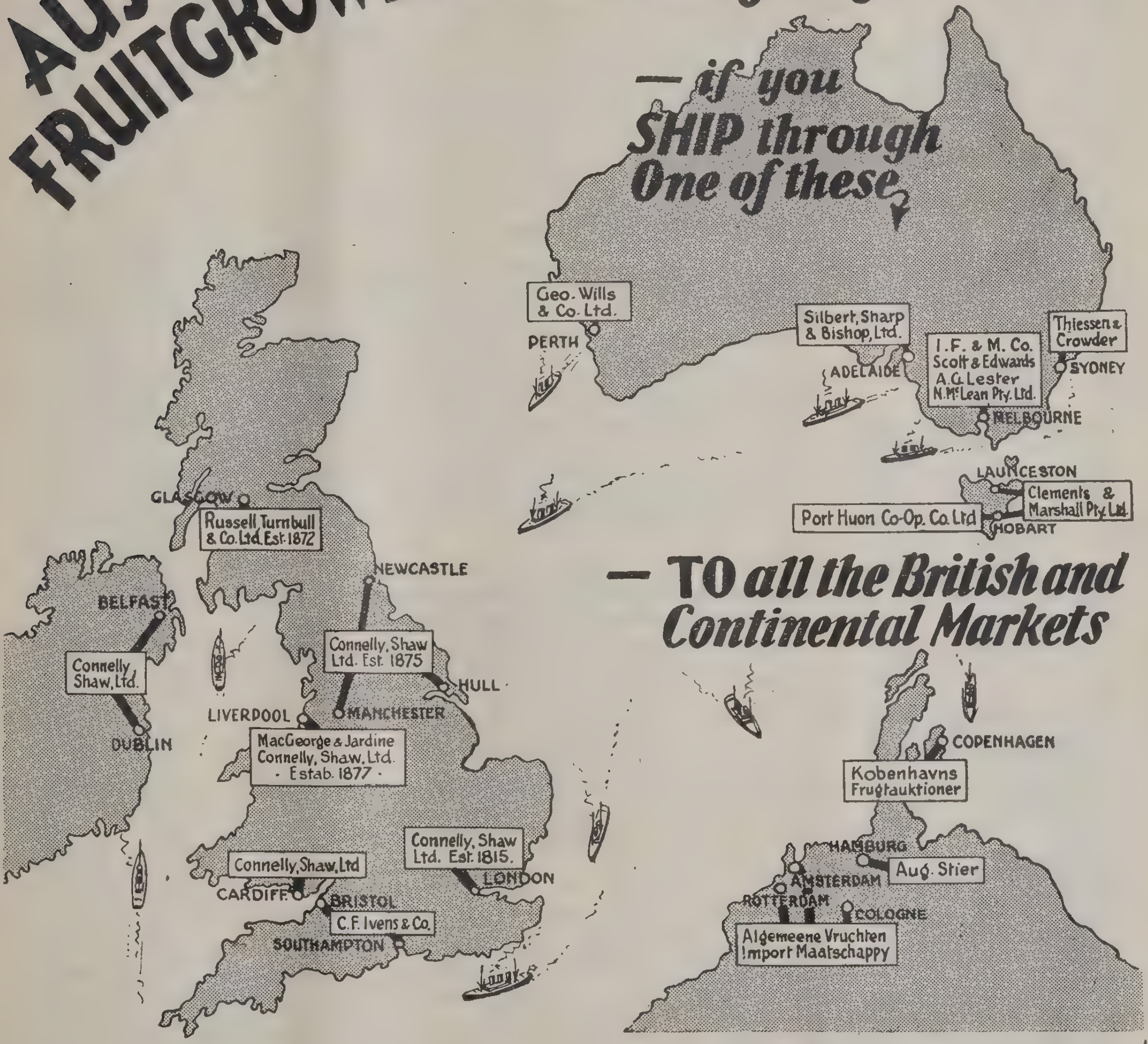
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packing, so that the buyer knows at a glance what he is getting. If you prefer to stick to sizes, adopt the one-eighths preferably to one-quarter inch division. It makes your pack more readily saleable. Also, don't forget there are such things as cold stores. It pays very often to hold back certain varieties or even certain sizes till later on in the season. Usually you will find big fruit is most in demand while prices are low, and vice versa.

(7) Be strictly honest in the marking of your packages. Don't brand SPECIAL grade when you know the fruit is only STANDARD quality. Don't put 2½in. on your apples if they are rightly 2⅜in. or 2¾in. size.

(8) Look ahead for other outlets. The markets in Australia are good ones, but they cannot nearly absorb the huge quantities which are likely to be produced in the near future. Co-operation and co-ordinated efforts between the producer, the wholesale men and the Government in opening up and developing the prospective vast markets in the East and elsewhere seem a feasible proposition.

I have been asked, before concluding, to refer to the question of special types of cases for certain fruits.

While in general it may be accepted as correct commercial practice for ordinary hard fruits to be packed in bushel cases, the softer or more quickly perishable kinds in half cases, with one-quarter cases for the delicate fruits, such as cherries, still there are the different shapes or types of case of each capacity to be considered. For instance, grapes and plums seem to be better marketed in the flat or hinged lid half case, while peaches, apricots and nearly ripe pears find a congenial pack in the dump shape of half case.

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Then with the bushel case—there are quite a number of shapes. The flat bushel, or so-called "packer," is often condemned as unsuitable, and rightly so for many fruits, but for the long varieties of pears with long, awkward stalks, such as L.B. de Jersey, B. Bosc, B. de Cap, etc., etc., there is probably no better package, as the narrow width of the case seems just to accommodate a 2.1 pack with the stalks safely out of harm's way. Of course, you all know that many varieties of pears are somewhat delicate fruits and stalks cause great damage by puncturing.

Again, many thousands of bushels of Victorian-grown fruit—apricots, peaches, pears—come to Sydney markets each season in this type of case and carry and keep very well, even during prolonged cold storage. The numerous openings between the boards afford ample ventilation, and the partition in the centre of the case makes it a strong and safe one for the fruits for which it is suited.

Can costs of marketing fruit be reduced? That is a question often asked.

While much has been done during recent years by growers' organisations in this State to reduce costs by bulk loading, bulk cartage, etc., the cost of selling on the market has not been reduced, and under present conditions is not likely to be, for the reason that many cases of fruit on which 6d. in commission is earned may have cost the agent anything up to 9d. or more to handle in the shape of wages, rents, overhead expenses in general, and by provision for bad debts, which are by no means rare.

The time to expect a reduction in selling charges will be when the fruit marketed in Sydney consists of fewer varieties and those the most suitable; when SPECIAL is easier to find than PLAIN grade, and when the packing and get-up generally are of the highest standard. Then the average prices realised should be higher than they are to-day, the selling a much easier and quicker matter, and business generally more satisfactory for grower, agent and purchaser.

SYDNEY MARKET REPORT.

Mr. P. S. Macdermott, Market Representative to the N.S.W. Fruitgrowers' Federation, reports as follows for the week ending 27th October, 1930. Prices quoted are for average quality fruit in sound condition:—

Apples: Jon., 7/- to 11/- per bushel (some to 12/-); G.S., 10/- to 16/- (few special to 18/-); R.B., 6/- to 10/-; Del., 6/- to 16/- (few special to 20/-); F. Crabs, 6/- to 11/-; Sturmers, 4/- to 8/-; Demo., 7/- to 11/- (few special to 12/-), Croftons, 7/- to 11/- (few special to 12/-); Yates, 5/- to 12/-.

Good demand, especially for the better sizes. Victorian consignments are still increasing, and if this continues, values may ease a little. Tasmanian shipment due to-day is advised as 15,000 cases, of which 3000 are to be transhipped to Brisbane.

Bananas: 9's, 24/- to 25/- per tropical case; 8's, 20/- to 23/-; 7's, 14/- to 18/-; 6's, 10/- to 12/-.

No improvement in demand, but owing to the scarcity of good ripe fruit, values moved up during the week. Supplies are expected to be light also this week.

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Cherries, 10/- to 16/- per box. Only a few boxes arrived during the week, and odd ones realised up to 20/-. Estimates to hand indicate that the crop of early varieties is light, but economic conditions will prevent very high prices.

Grape Fruit, 6/- to 10/- per bushel; some special brands higher. Only a limited demand for good fruit and large sizes.

Loquats, 3/- to 10/- per box. Fair demand for large, clean, well-colored fruit, but small and inferior hard to sell at low prices.

Lemons: Coastal, 3/- to 5/- per bushel; M.I.A., 5/- to 8/-. A slight improvement in demand noticed, but buyers are confining their attention to fruit that will keep. The market is not yet ready for an increase in supplies.

Mandarins, 2/- to 10/- per bushel; few special higher. Poor demand, which is practically limited to juicy fruit.

Oranges: Commons, 4/- to 6/- per bushel (few special to 8/-); Navels, 5/- to 13/- (few special to 14/-); Val., 5/- to 8/- (few special to 9/-). Demand was not firm, and the market is unsteady. Commons eased about 1/-. Navels show a wide range. Good fruit of the medium sizes realised up to 14/- for the picked sizes, but a fair percentage of Navels, especially from inland, is wasting quickly, and has to be sold at once, often at low prices. Supplies of Valencias have been very light, but the demand is limited, and values are expected to ease as quantities increase.

Passion Fruit, 5/- to 12/- per box (few special higher). Good demand for quality fruit, and prices are firm.

Papaws, 5/- to 10/- per tropical case. Fair demand. Arrivals have increased, with a corresponding fall in values.

Pears: Packham, 6/- to 10/- per bushel (some to 12/-); Jos., 7/- to 14/-; (some to 15/-); W. Coles, 6/- to 12/- (some to 13/-); W.N., 6/- to 12/-. Steady demand, and values for good sizes are firm. Packhams are not opening up well, and buyers are leaving them alone.

Pineapples, 8/- to 12/- per tropical case.

Tomatoes, 4/- to 8/- per box. Demand was affected by the weather conditions during the week, and the market was weaker. Values for this week may ease a shade, as supplies are plentiful.

General.—Trade was steady during the week for apples and pears. Supplies of Interstate apples were heavier. and values are not as firm as a week ago. G. Smiths came back a little. The wet and cold weather affected the demand for citrus. Fortunately, the same conditions prevented growers picking, and with a reduction in supplies, values were fairly well maintained. Unless the demand increases, prices will come back as arrivals become heavier.

Shipments to New Zealand.—Shipments to N.Z. for the week ended 24/10/30 were:—

	Oranges. cases.	Mands. cases.	Lems. cases.	Sevs. cases.	Total cases.
Wellington	2725	379	82	17	3203
Christchurch	441	—	—	—	441
Lyttleton	138	25	20	—	183
Dunedin	5	25	—	—	30
Palmerston North .	50	—	—	—	50
	3359	429	102	17	3907

NEW SOUTH WALES.

Sydney, 23/10/30.—Mr. F. Chilton, City Markets, Sydney, reports prices as follows:—

Queensland Fruits.—Bananas, 14/- to 25/- per case; pines (Queens), 9/- to 12/-; papaws, 6/- to 12/-; tomatoes, 4/- to 7/- per half-case.

New South Wales Fruits.—Bananas, 14/- to 25/- per case; oranges (Val.), 5/- to 8/- per bus.; oranges (navels), 9/- to 14/-; mandarins, 2/6 to 10/-; lemons, 3/- to 7/-; apples (G.S.), 8/- to 16/-; passions, 5/- to 13/- per half-case; loquats (mammoth), 5/- to 10/-; cherries (extra early varieties), 14/- to 16/- per quarter case..

Victorian Fruits.—Apples: Yates, 6/- to 12/- per bus.; Jon. and R.B., 6/- to 10/-. Pears: Jos., 10/- to 14/-; W.N., 8/- to 12/-.

Tasmanian Fruits.—Apples: Tasma (Democrat), 7/- to 11/- per bus.; Crofton, 5/- to 10/-; Jon., 5/- to 10/-; S.P.M., 5/- to 10/-; F.C., 6/- to 10/6. Pears: W. Cole, 3/- to 6/- per half-case.

South Australian Fruits.—Valencias, 6/- to 7/6 per bus. case.

The demand continues moderate, and, with the advent already of cherries and apricots, plums, etc., to arrive in the very near future, prospects for late apples and for citrus fruits do not indicate usual end-of-season high prices.

Margetson & Co. Ltd.
Fruit Importers and Salesmen
30 James Street and James Street Warehouses,
11 Neal Street,
COVENT GARDEN, LONDON, W.C.,
and at Jamaica House,
9 and 10 Botolph Lane, London, E.C., and
56-58 Stanley Street, Liverpool.
Sales by PRIVATE TREATY.
Prompt Returns and Settlements.
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Covent Garden Market, London, W.C.
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Shipping Nos.: 431 and 432.

LEMONS FROM ITALY.

THE requests by the Italian Chamber of Commerce that the embargo on the importation of lemons into Australia from Italy be lifted, are supported by the New South Wales Wholesale Fruit Distributors' Association Ltd.

The secretary (Mr. John B. Ferguson) stated that they thought the Italian lemon should be allowed into New South Wales, as it is imported from December to March, which is the off season for locally-grown lemons.

The statement that local lemons are hard, green, and almost without food value during the period when Italian lemons are in season is ridiculed by Mr. H. G. Such, manager of the N.S.W. Central Citrus Association. Mr. Such stated that they were making preparations to supply the market during January, February and March with

CASE AND CAN LABELS DESIGNED AND PRINTED BY

McGILL PTY. LTD.

56 Clarendon Street, South Melbourne, S.C.5. Victoria

ROSE
VERITY
AUSTRALIAN APPLES
NGAWE
(NA-WE)
WASHINGTON NAVELS
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IXL
ONE BUSHEL APPLES
TYCOS BRAND
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ARDMONA APRICOTS

Giving Individuality to Your Products

INDIVIDUALITY! The greatest factor in successful selling. How can you achieve this ideal in the marketing of your fruit? Colorful, artistic case labels will reflect the high standard of quality you have aimed to be associated with your products.

We are specialists in the creation of attractive labels for fruit cases. We have the artists and equipment to supply labels that compare favorably with the best American productions. All of our labels are specially varnished to render them waterproof and thus ensure permanent adhesion to the case.

Fill in the coupon below and let us send you, WITHOUT OBLIGATION, our Catalogue comprising a range of the high-grade colored labels we have printed.

McGILL Pty. Ltd.
56 Clarendon St., South Melbourne, S.C.5, Victoria

Please send me your Catalogue of colored Fruit Labels.

Name..

Address...

cured lemons, locally grown, which will be fully comparable in appearance and quality with imported fruit.

The importing movement will be opposed by the whole weight of the fruit-growers. Each year sales of local lemons become unpayable, owing to the arrival, after December, of the imported fruit.—"The Land."

MELBOURNE NEW MARKET.

Opened on December 1.

VERY CONSIDERABLE IMPORTANCE is attached to the fact of the opening of the new wholesale section of the Victoria Market, Melbourne.

The wholesale fruit business, previously conducted at the Western Markets, Melbourne, has been transferred to the new position. The new market additions cost £100,000, and, in the opinion of Mr. G. B. Minns (Market superintendent) this market, covering 16½ acres, is now the largest of its kind in the world.

TRADE NOTES.

Mr. H. Howard, of the Golden Valley Fruit Co., will leave, early in the New Year, for England. The chief object of his voyage overseas is a visit to his parents. While abroad, he will inspect some of the fruit distributing centres and watch the marketing methods. Mr. Howard expects to be absent for about six months.

G. Woolf and Sons disposed of several hundred cases of oranges from Cleave Bros., Tocumwal, N.S.W., during October. The boxes bear an attractive label, and the fruit was of good quality.

Another very attractive label is that used by G. Woolf and Sons for their Valley View apples. Alongside a view of their Pakenham orchard is a healthy-looking boy eating a rosy apple.

A very attractive label is being used by Mr. Eagle, of Barham, N.S.W. Outlined by a map of Australia, a view of a citrus orchard occupies the centre of the label, while on one side of the central design are three large oranges. The name Golden Glow Citrus Grove stands out boldly.

Frankel Bros, Fruit Merchants, Victoria Market, Melbourne, are handling a nice line of oranges, from Kangaroo Lake, which are selling well. Kangaroo Lake is in the Kerang district, near Tresco, and is practically a new grove area. Many of the growers are well known in politics, and one of the first to take up land there for citrus was Mr. William Watt, formerly Treasurer in the Commonwealth Government. Frankel Bros. have made arrangements to handle large quantities of fruit from the Goulburn Valley during November.

Messrs. J. H. Young and Co. will handle for the first time consignments of tomatoes from Barham, Koondrook, and Murrabit. The first consignments are expected to arrive about the 15th of November. Tomatoes grown in the districts adjacent to the Murray are stated to be of excellent quality this season. Peaches from the Ratcliffe orchards in the Goulburn Valley, which sold so well last season, will again be featured by J. H. Young in the coming season.

Retail Fruiterers' Association.

AT the meeting of the Executive of the Melbourne and Metropolitan Retail Fruiterers' Association, held on October 2nd, the following resolution was unanimously passed.—

"That from the date of the official opening of the new market, this Association will support the new Queen Victoria (Wholesale) Market, and will co-operate with the City Council in its efforts to concentrate the wholesale fruit trade in one area, and thereby greatly improve the marketing conditions in the whole industry."

For some time past the retail fruiterers have been very dissatisfied with the conditions under which they have been compelled to secure their supplies, sometimes under harassing traffic regulations in the vicinity of the Western Market, also in Little Bourke-street, and they are also of the opinion that the saving of cartage, and less handling of soft fruits, particularly, will be of great advantage to both growers and consumers.

Many delegates and members of the Retailers' Association had refrained from attending the Victoria Market on Mondays, Wednesdays and Fridays, with the sole object of inducing the City Council to proceed with the erection of the new market at an earlier date, but now there is every probability of those days becoming just as popular as the others.

It was also decided to hold the Association's picnic at Sorrento on the second Wednesday in March, 1931.

It is with regret that we learn of the illness of Mr. Thomas Millis, head of the well-known firm of fruit merchants, A. Millis and Sons. Mr. Millis is suffering from a nervous breakdown. We wish him a speedy recovery.

RIDLEY & HOULDING
Covent Garden Market
LONDON

Specialists in Australian Fruit.
Solicit consignments of Apples, Pears, Etc.
Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

Representatives—
International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; and A. J. Walshe & Co., Hobart, Tasmania.

TASMANIA
Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.

Agents for—
Associated Evaporated Apple Manufacturers, London Assurance Corporation, Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osake Shosen Kaisha.

Correspondence Invited.

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J. G. MUMFORD
(Established 1906)
Fruit & Vegetable Salesman
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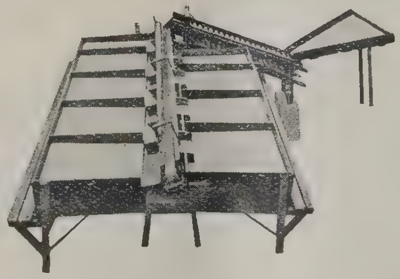
Reference—Satisfied Growers in all States

"To Choose the Best is Wisdom"

BETTER PRICES—

CAN THEY BE OBTAINED FOR FRUIT?



Three Quality—Model 17.

By the use of **Organized Packing Methods and Proper Facilities** the value of the fruit is **increased** and costs reduced. **Fruit well graded and properly packed attracts the right class of buyer.** Special efforts for the coming season will be well worth while and their success will depend greatly on the facilities used.

"Lightning" Equipment is Specially Designed to help you obtain MAXIMUM RESULTS at a MINIMUM COST.

Our Catalogue, No. 7, has just been issued, and shows Models specially designed to help you with your marketing problems. We will be pleased to post you a copy.

Note Our New Address:

The "Lightning" Fruit Grader Co.

517 Albion Street, West Brunswick, N. 12. Melbourne, Vic.

AUSTRALIAN FRUIT EXPORT.

Mr. H. G. Colombie's Review of the 1930 Season. Prospects Good for 1931 Export.

AFTER HAVING VISITED the United Kingdom and Europe during the past Australian fruit export season, Mr. H. G. Colombie, who represents a number of leading British and Continental fruit brokers, has issued a statement summarising his impressions. He states that early in the season he was able to correct a wrong impression which had gained ground concerning abnormal quantities in early shipments. Market values were maintained at a fair level, but about mid-June the prices collapsed, owing to (1) the excessive quantities then available, (2) the excessively hot weather, and (3) a super-abundance of soft fruits.

From mid-June onwards, much of the fruit, particularly that from Tasmania, arrived in bad condition. The total quantities received in the United Kingdom in August, 1928, and August, 1930, were as follows:—

	From Aust.	From U.S.A.	Total.
1928	150,970	501,300	652,270
1930	245,340	152,400	397,740

And yet prices for Australians were much lower in 1930 than in 1928, this being undoubtedly due to the low parity created by so much faulty fruit, whilst Americans were selling at about double the price.

On the whole, the packing, grading, quality and presentation showed an improvement, but further progress was necessary.

The trade was generally pleased with the change over from the dump to the Canadian case, but a bigger bulge and tighter packing were necessary. Many cases showed a shortage of 4 to 5 lbs. of fruit, but this would doubtless be remedied when growers are more used to the new container.

As regards distribution, there was a marked improvement, but some markets were over supplied, and others under-supplied. Suggestions for improvements are being made.

Quantities.

In the record year of 1928, Australia shipped 4,072,000 cases, and New Zealand 870,000, or a total of 4,942,000; but in 1930 the totals were:—Australia, 4,318,000, and New Zealand, 1,105,000, or a total of 5,423,000, but whereas over 2,500,000 cases had been received at U.K. ports up to June 10, 1928, only 2,144,000 had been received up to June 10, 1930, so that, even allowing for the increased proportion to the Continent in 1930, this year shows that a larger proportion was marketed at what may be considered the worst period of the season, when heavy quantities are concerned. Detailed figures are as follows:—

	1928.		1930.
Aust. to U.K.	3,148,000	. .	3,195,000
N.Z. to U.K.	870,000	. .	938,000
Aust. to Continent	924,000	. .	1,123,000
N.Z. to Continent	—	. .	167,000
	4,942,000	. .	5,423,000

After commenting on cool storage, f.o.b. sales, London Fruit Exchange, Mr. Colombie refers to pears, the market being well sustained with a healthy demand. Some traders recommend using more wood wool with soft varieties, side, tops and bottoms. A series of interesting recommendations are made, indicating the sizes and types of fruit required in the various British and Continental markets. It is a mistake to send 2¼in. apples to Glasgow, Hamburg or Rotterdam. Another grave error is to send such a large quantity as 200,000 cases in a single steamer. Late shipments are not recommended. Marks on cases should be confined to one end. Particular care should be taken for correct classification. The opinion in the trade is that too many varieties are sent from Australia. It should be noted that the leading box apple districts of the U.S. Pacific Coast, namely, Wenatchee and Yakima, despatched in the 1928 season 15,176,000 cases, which consisted only of 16 varieties, and of that total, 14,771,000 cases covered only six varieties. Since then, the number of varieties had been still further reduced.

Importance is attached by buyers to colour grading.

Mr. Colombie urges the formation of a Commonwealth Export Council to act in co-operation with a U.K. Advisory Committee.

PROSPECTS FOR 1931.

Indications Favorable for Australia.

American crops are about the same as last year, that is to say, below normal, and as crops are generally short in Europe, it is thought that, contrary to last year, a fair proportion of apples from the North American Continent will be attracted to Europe early in the season, thus giving greater relief to the position. The European demand for apples should also be stimulated because of the shortage in the Spanish grape and the Spanish and Jaffa orange crops. In addition, as general values are on a lower level in America, it is expected that there will be freer trading, leading to greater and more rapid consumption, which should, in turn, relieve the quantities available for export from America during our period, and, at any rate, ruling values should then be on a satisfactory level.

Moreover, it is not thought that the total exports from the Commonwealth will approach anywhere near even the 1928 season, so that the smaller supplies should lead to more healthy markets in Europe.

Mr. H. G. Colombie, who recently returned from a trip to Great Britain and the Continent, and is visiting Tasmania in November, at the request of the Tasmanian exporters, will address a series of meetings on overseas marketing, and will also give a survey of observations and recommendations. Meetings to be addressed by him will be as follows:—November 11, Exeter; 12, Beaconsfield; 13, Hillwood; 14, Lilydale; 15, Spreyton; 17, Bagdad, New Norfolk; 18, Huonville; 19, Franklin; 20, Geeveston; 21, Craddock; 22, Cygnet, and 24, Woodbridge. Growers will have opportunities of asking questions on all marketing matters.

IMPORTANCE OF PRIVATE ENTERPRISE.

To develop Australia—to maintain national stability—to keep the wheels of industry turning—to reduce unemployment—this country depends upon private enterprise. So said the Acting Prime Minister (Mr. Fenton) at Wesley Church, Melbourne, on Sunday, September 21.

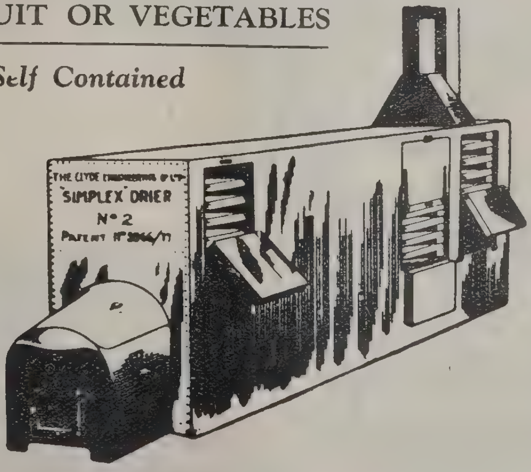
Commenting on this speech, the leader of the Opposition (Mr. Latham) said this was indeed a worthy statement—coming as it did from a Labor Prime Minister.

The Clyde Simplex Driers

For Drying
Fruit Vegetables and other Products

NO MORE WASTE FRUIT OR VEGETABLES

Simple - Self Contained



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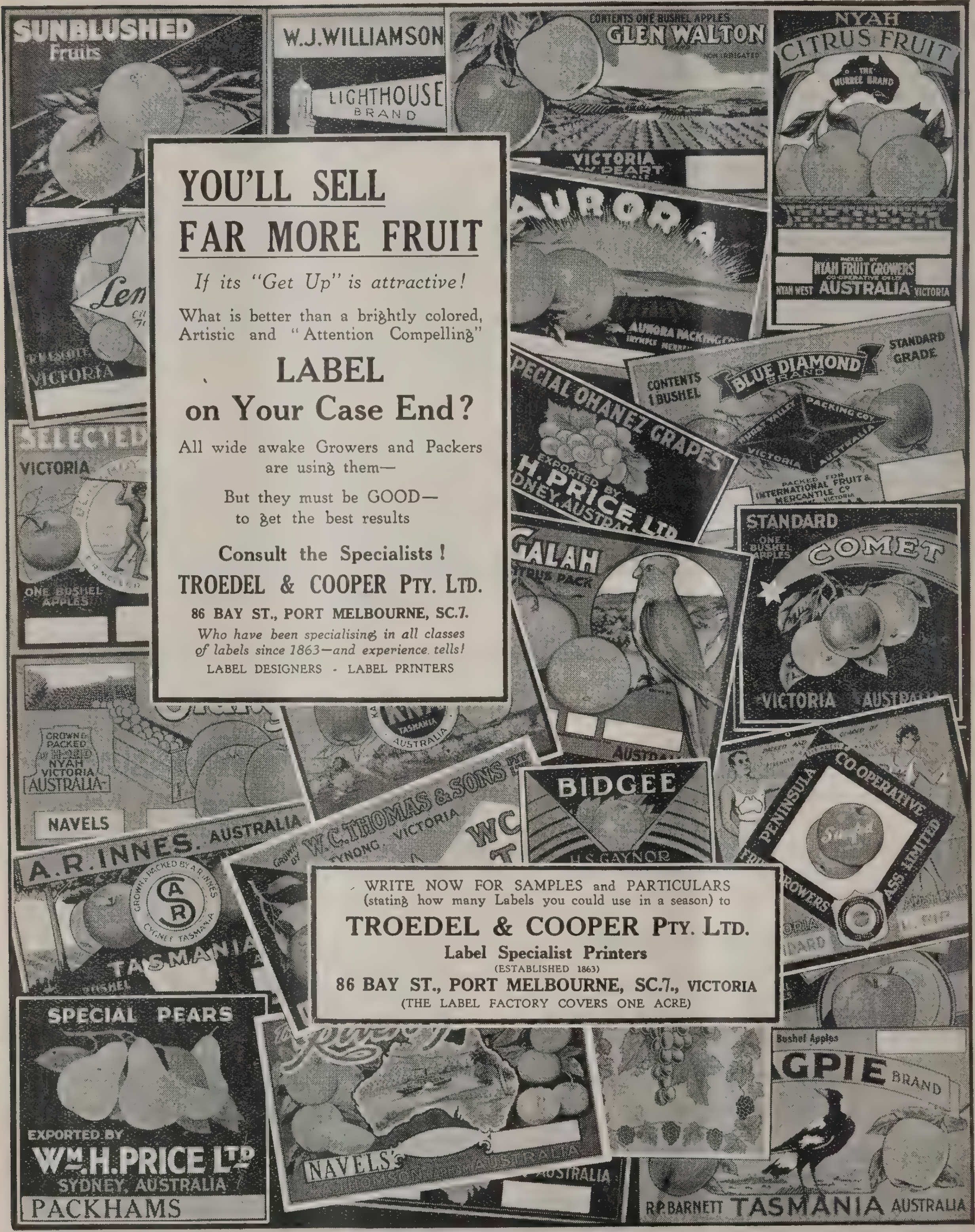
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YOU'LL SELL FAR MORE FRUIT

If its "Get Up" is attractive!

What is better than a brightly colored, Artistic and "Attention Compelling"

LABEL on Your Case End?

All wide awake Growers and Packers are using them—

But they must be GOOD— to get the best results

Consult the Specialists!

TROEDEL & COOPER PTY. LTD.

86 BAY ST., PORT MELBOURNE, SC.7.

Who have been specialising in all classes of labels since 1863—and experience tells!

LABEL DESIGNERS - LABEL PRINTERS

WRITE NOW FOR SAMPLES and PARTICULARS
(stating how many Labels you could use in a season) to

TROEDEL & COOPER PTY. LTD.

Label Specialist Printers

(ESTABLISHED 1863)

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(THE LABEL FACTORY COVERS ONE ACRE)

If you cannot afford to Manure much this Year—

Don't Omit Nitrogen

What SUPER is to the WHEAT Crop
NITROGEN is to the FRUIT TREE

Apply one of the following:

During the Setting of Fruit

Calnitro **Urea**

Nitrate of Lime

Stocks immediately available from YOUR PACKING SHED, or LOCAL AGENT, or write to us

Henry H. York & Co. Pty. Ltd. 573-585 Lonsdale St., Melb.
(Late Dyes & Chemicals (Aust.) Ltd.)
Sole Distributors Write for Pamphlet

New Zealand.

The New Zealand Government has adopted a project for the establishment of an experimental orchard at Nelson. The Edyvean Orchard, Nelson, will be utilized for a research programme, and an expenditure of £810 towards maintenance has been authorized by the Cabinet.

The research programme will be under the direction of a Fruit Research Committee, consisting of representatives of the New Zealand Fruitgrowers' Federation, Fruit Control Board, Department of Agriculture, the Cawthron Institute and the Department of Scientific and Industrial Research.

The total area of the orchard is 40 acres, 20 of which are in fruit trees. £2,000 towards the capital cost, and £1,500 annually for five years has been offered by the Empire Marketing Board, and an expenditure of £1,250 on the scheme was recently approved by the Federation Conference.

Among the items included in the programme are root stock experiments.

The Hon. H. Atmore states that this scheme will enable an important programme to be carried out, and will make for the firm establishment of a rapidly developing export industry.—"The Orchardist of N.Z."

MARKET REPORT.

Reilly's Central Produce Mart reports as follows:—Apples: Del., 10/-, 14/-; small, 6/-, 8/-. Jon., 6/-, 9/-. Other desserts, 6/-. Sturmers, 9/-, 11/-. Cooking, 6/-, 8/6. Pears: W.N., 4¾d., 5¾d. Cooking, 3d. Oranges, in full supply: Navels, N.S.W., 22/-; Valencias, 16/-. American grapes, 27/6. Mission lemons, 50/-; Australian, 20/-; N.Z., 15/-. Grapefruit, Australian, 18/-. Australian passions, 24/-. Pineapples: Choice Queens., 22/- to 26/-. Loquats, choice, 16/-. Bananas, ripe, 32/6. Mandarins, choice, 18/-.

QUICK FRUIT DISCHARGE AT LONDON.

An excellent performance was recently noticed when the Union Castle chartered steamer, Murillo, took to London from Cape Town more than 100,000 packages of oranges and other South African citrus fruits. The vessel berthed at West India Docks, and was completely discharged in 28 working hours; this is equivalent to over 3700 packages per hour. The peak time was on the second day, when 37,000 packages were discharged in eight hours. There were in the cargo 300 different shipments, each requiring to be kept separate for delivery to the consignees; so expeditiously did work begin on the cargo of the Murillo, that the first load was at Covent Garden within an hour and a half of leaving the steamer's refrigerated chambers, and loads placed on the rail for provincial centres were despatched to their destinations in quick time.

Sir Stanley Argyle's Oranges.—A consignment of oranges from S. Argyle, Kangaroo Lake, to Melbourne, was from the Leader of the Opposition in the State Parliament, Sir Stanley Argyle.

Australian Fruit in Overseas Markets

Mr. J. W. Barker, of the firm of Barker, Green and Parke, recently returned on the "Naldera" from a trip to Great Britain and the Continent. Mr. Barker visited all the important marketing centres of England and Scotland, including London, Liverpool, Hull, Manchester, Glasgow, Southampton. On the Continent he visited Hamburg, Copenhagen, Stockholm, Rotterdam. This is Mr. Barker's third trip within the last five years. Each trip has coincided with the arrival of Australian fruit on the markets referred to. He had an opportunity of comparing the quality and general presentation of Australian fruit this year with his previous visits, and has no hesitation in saying that so far as Victoria, South Australia and Western Australian fruit is concerned there is considerable improvement.

He maintains that the use of the Canadian case and attractive colored labels is a distinct improvement.

In addition to interviewing wholesalers, he also called on nearly 200 retailers, and they were unanimous in stating that there was a great improvement in the "get-up" of Australian fruit.

Speaking of the requirements of the various ports, he finds that London buyers prefer the smaller apples, size about 2⅛in. and 2¼in.; Liverpool, Glasgow and Hamburg prefer sizes 2½in., 2¾in. and 3in.; Copenhagen and Stockholm, 2¼in. and 2½in. Growers will profit greatly by consigning apples of the sizes mentioned. In some cases, in his opinion, the increase in price would be from 2/- to 3/- per case in the different markets.

Mr. Barker contends that Hamburg is the best distributing centre for Central Europe, and does not recommend large shipments to Antwerp, Bremen, Amsterdam and Rotterdam. He instanced a case where 40,000 cases from the "Port Hunter" arrived in Rotterdam during his visit. This large quantity knocked the bottom out of the market, and the bulk of the fruit had to be cold-stored, with the resultant extra charges. A larger quantity of apples from the same boat reached Hamburg about the same time, and realised good prices. The 40,000 cases sent to Rotterdam could also have been absorbed quite comfortably on the Hamburg market.

The slump which took place at the end of the season was due to the exceptional heat wave which swept Great Britain and the Continent, resulting in strawberries coming on to the market earlier than usual, and the whole of the crops ripening and having to be sold within ten days instead of the season being spread over six weeks. Within the ten days strawberries were selling at 9d. per dozen lbs. In addition, other berry fruits and local fruits were on the market. The season was an abnormal one, and nothing like it has been known for 50 years. Further, some of the large English buyers secured their strawberries from Russia at very low prices, and thus the demand for local strawberries was not as large as in previous years.

Mr. Barker had an excellent opportunity of witnessing sales at the new Spitalfields Markets, the facilities for handling are second to none in the world, every convenience for the sales and showing of fruit being provided. All fruit in this market is sold by auction, and he found that the brokers always looked after the growers' interests. If the market were dragging, consignments would be withdrawn and re-offered two or three days later.

Glasgow offers a good opportunity for disposing of Australian fruit. The sizes required are from 2⅜in. upwards.

Manchester is a port that should be carefully watched. He maintained there is an excellent opportunity for developing a big market here.

London is the best market for pears. Most of the pears sent on to that market this year realised good prices. He saw Californian W.B.C. pears selling on the London market in August, and they realised 21/- per case. Hamburg can also absorb large quantities, and providing they

-LEMONS-
We are the largest Buyers in Australasia
C. M. BROOKE & SONS
73 Whiteman St., South Melbourne, Vic.

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"HENTY HOUSE," 499 LITTLE COLLINS ST.
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GENUINE
"BLACK LEAF 40"
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Distributors
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TREES
Best, cleanest, healthiest stocks in all kinds of Fruit Trees, Ornamentals, etc., available at Goodman's—Australia's leading Nurseries for over 40 years.
Reliable Trees that will prove prolific bearers sent to all parts of Australia. Catalogue free.
GOODMAN'S NURSERIES
P.O. Box 47.
BAIRNSDALE — VICTORIA.
(W-McF.)

reach the market in good condition, good prices will be realised. He instanced cases of Tasmanian Josephines, Beurre Bosc and Comice pears which brought prices up to 20/- per case this season.

Speaking of plums, he said buyers are anxious to obtain shipments which arrive in London in late April or early May. South African plums are finished, and there is an opening for Australian plums to fill in the gap before the Italian and other plums arrive. 20/- per case should be realised for plums which are packed properly and arrive in good condition. Grand Duke or other good carrying plums should sell well. He suggests that they be packed and wrapped in cardboard containers, similar to those in which eggs are exported, and strapped together to make a box. Growers should see that plums are pre-cooled immediately they are picked.

Grading for Color.—Mr. Barker said he recognised the difficulties which Australian apple growers had to contend with in this matter. Australia was slightly behind New Zealand and America in this respect. Grading for color early in the season would considerably help our shipments. Colored fruits should be packed separately from green fruit. Lack of color was apparent in early shipments, but this defect was much improved on later shipments.

Varieties.—Too many varieties are shipped, and it is suggested that growers confine their energies to long, straight lines of well-known popular varieties. Granny Smith is becoming even more popular, and holds its own against competition. True to type Jonathans are also eagerly sought after.

The prospects for the future export of Australian fruit are believed to be bright, but every effort must be made to bring costs of production down, as the costs all over the world are falling, and buyers cannot secure the high prices which they obtained in the past.

Mr. Barker is the representative in Australia for Simons and Company Limited, who are represented in all the parts of Great Britain; Timm and Gerstenkorn, of Hamburg, Germany, and A. W. Kirkbye, Copenhagen.

RESEARCH WORK APPRECIATED.

At the August meeting of the South Australian Advisory Board of Agriculture, a resolution was received from the Monash and Berri districts appreciating the good work being conducted at the Berri Experimental Orchard and requesting that there be no curtailment of its activities.

Before you Finalise
Your spraying programme for 1930/31
CONSIDER the time and labor-saving advantages of dusting for EFFECTIVE PEST CONTROL

EFFECTIVE G.B DUSTS

Complete Dusting Schedule Posted Free on Application.

Niagara Dusters
The best of ALL

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Also sold in small tins for Home Gardens

The Fruit Trade

Market Reports and News Items

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VICTORIA.

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Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
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Mumford, J. G., 449 Flinders Lane.
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Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
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Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.

Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.

Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.

London:
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd.
The White Service.
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.

Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.

Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.

Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers.
Johnson, T. S., & Co.

Bristol and Southampton:
Bristol Fruit Brokers Ltd.

Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.

Glasgow:
Russell, Turnbull & Co.

FRANCE.

Scheiber, E., Paris.

GERMANY.

Bremen:
Fruchthandel, Gesellschaft.

Hamburg:
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

SYDNEY AGENTS AND MERCHANTS.

GROWERS sending fruit to Sydney will note the following numbers denoting the agents and merchants in Sydney.

The list includes those now trading as merchants who last year were registered as agents:—

Sydney Agents.

242. A.G.S.A. Ltd.
54. Allen, Stan.
235. Baker, J. N.
178. Batchelor, Son & Mitchell.
246. Beard, A. G.
267. Billion, R. J.
24. Billett, E. J.
58. Boot & Carter.
56. Chilton, F.
444. Clarke & Son.
203. Comino Bros.
122. Cooke, E.
51. Cooper, A. J.
17. Dunston, W., & Son.
72. Fear & Paulin.
264. Fisher, S. K., Ltd.
40. Greentree, H. J.
166. High, D. G.
8. Hie Lee.
15. Harris, W.
25. Hop Lee & Co.
30. Jenkins & Lonbregan.
52. Jenkins, J.
4. Jones, R. C.
6. Jurd, W. A.
191. Kirkwood, W.
12. Kemp, H. G.
85. Kellaway & Son.
18. Musgrove, W.
26. Mow Sang & Co.
79. Mitchell & Lawless.
90. Molesworth, G. H.
98. Mason & Co.
113. Mitchell, T. S.
170. Middleton & Mayo.
265. McLeod, G. M.
10. Neil Jolly & Co.
5. P.D.S.
65. Piggott, C. G.
83. Rogers, F. H. G.
173. Reedy & Lee.
212. Ridge, V.
1. Reedy, J. A.
38. Stimson & Firth.
28. Small, A. O.
49. Sam Yick.
101. Stanton, E. T.
127. Stevens, F. G., & Sons.
162. Spurway, A. E.
266. Sue Fong.
74. Turnbull, W. E.
165. Thiessen & Crowder.
150. Thompson & Smith.
177. Veitch & Pierce.
229. Valentine, R.
2. Watkins & Evans.
21. Wing Sang & Co.
22. Wing On & Co.
115. Wing Tiy & Co.
188. Ward & Felton.
132. Wilson Bros.
23. Yocksui Bros.

Trading as Merchants.

152. A.F. & P. Co.
63. Atkinson, T. G.
168. B.P.B. & Co.
62. Bart Allen & Son.
196. Caldicott, W. H., & Co.
82. Clarke, H. M.
207. Cowell, R., & Co.
46. Clayton, J.
50. Carroll, E. C.
117. Exchange Fruit Supply Co.
161. Greenberg Bros.
31. Hawke, J.
171. Holmes, J.
89. Lockhart, H. C.
111. Moss, J., & Sons.
67. On Sang.
73. Palmisano & Sons.
80. Rule & Beavis.
19. Slater, J.
7. Salmon & Co.
60. Salter Bros.
37. Silk Bros.
100. Southcott, W. H.
231. Scott, W.
180. Stassi, G.
14. Watt, C. G.

Market Reports.

QUEENSLAND.

Brisbane (25/10/30).—Local Fruit.—Oranges, 8/- to 11/- bush.; specials, 12/- to 13/-; small, 4/- to 8/-. Lemons, 5/- to 12/-; second crop, 2/- to 4/- bush. Mangoes 8/- to 10/-. Passion fruit, 9/- to 16/- half case. Papaws, 2/- to 3/- bush.; flat cases, 3/6. Imported Fruit. —Oranges, Val., 9/- to 11/- bush. Lemons, 9/- to 12/-. Apples, Victorian, Jon., 10/- to 14/-; small, 6/- to 7/-; Yates, 9/- to 13/-; F.C., 13/- to 15/-. Pears, Jos., 12/- to 15/-; W.N., 12/- to 15/-; B.P., 9/- to 13/-.

QUEENSLAND FRUIT IN MELBOURNE.

Mr. C. Parnell, Melbourne representative of the Committee of Directors of Fruit Marketing, Brisbane, advises as follows:—The total tonnage of fruit which arrived from Queensland up till October 29 was 2357 tons, including Cavendish bananas, sugar bananas, lady finger bananas, pineapples, papaws, beans, cucumbers, tomatoes, mangoes, passion-fruit and egg-fruit.

The prices for Queensland beans are not so good as previously, the majority which are now coming along being very old. These are finding a serious competitor on this market in the presence of fresh N.S.W. beans.

There are large supplies of practically all lines coming to hand, due to the good season in Queensland.

An attempt has been made to educate the public of Victoria in the value of papaw fruit, to be used in a fruit salad or to be eaten raw with lemon juice squeezed into it.

The Committee of Direction of Fruit Marketing is attempting to increase the sale of canned pineapples in England, and order forms are being distributed throughout Melbourne, explaining that a case containing 30 cans of 30 ozs. will be delivered to any address in Great Britain for a total charge of 35/-.

SOUTH AUSTRALIA.

Adelaide (25/10/30).—Apples, eating, 5/- to 7/- case; cooking, 4/- to 6/- case. Bananas (Qld.), 28/- to 30/- case. Lemons, 14/- to 16/- case. Loquats, 6/- to 8/- case. Oranges (common), 6/- to 7/- case; do., blood, 8/- case; do., navel, 8/- to 10/- case; do., poorman, 5/- case. Pears, eating, 5/- case. Pineapples, 20/- case.

TASMANIA.

Hobart (25/10/30).—Apples, Stp., 2/6 to 6/6; Dem., 3/- to 7/3; Del., 5/- to 9/-; other inferior varieties, 1/6 to 3/- per case. Pears, W. Coles, 7/- to 8/6; G.M., 5/- to 7/- per case.

WEST AUSTRALIA.

Perth (25/10/30).—Dunn's, dumps, 8/6 to 13/-; Yates, 8/6 to 15/6; G.S., 11/- to 17/- (others from 9/-); Cleo., 7/- to 11/-; Doherty, 8/- to 11/6; others, 7/6 to 12/-. Citrus.—Oranges, plain, flats, 3/6 to 8/-; dumps, 7/6 to 12/-; navels, flats, 5/- to 11/-; dumps, 9/- to 15/6. Lemons, 2/- to 7/6. Mandarins, flats, 5/- to 10/6; inferior, from 2/-.

After having experienced a light apple crop last season, West Australia is expecting a heavy crop, and should do well in the export trade.

VICTORIA.

Melbourne (31/10/30).—The following wholesale prices, supplied by the Wholesale Fruit Merchants' Association of Victoria, are those which ruled in the Western Market yesterday for average quality fruit:—Apples, good to choice eating, 3/6 to 8/-; cooking, 4/- to 7/-. Bananas, green, Queensland, special and choice, 17/- to 18/-; standard, 12/- to 16/-; plains, 9/- to 11/- per double case; some selected lines for country trade higher. Lemons, 4/- to 8/-; few specials higher. Papaws, 6/- to 10/- per double case. Mandarins are almost unsaleable. Oranges, commons, 4/- to 6/-; navel, 5/- to 9/-; some selected lines higher. Pineapples, Queens., 9/- to 11/- per double case. Tomatoes, Queensland, 7/- to 9/-; ripe, to 10/-; South Australia, 19/- to 20/-. Passion-fruit, 13/- to 14/- half case.

The Melbourne manager of the Federal Citrus Council of Australia reports that sales were as follows:— Average standard shed pack navel oranges, 5/- to 9/-; some selected lines, 7/- to 11/-, with odd sales to 12/-; common oranges, standard grade, 4/- to 7/-; a few special Mildura, to 9/-; a few Valencias, average standard grade, 5/- to 7/-; few Milduras, to 10/-. Lemons, medium sizes, 180-248, 7/- to 9/-; a few specials higher; small, marked, or large, from 5/-. Mandarins, best counts, sound packs, 4/- to 7/-; small and faulty, from 3/-; some small, unsaleable. Grapefruit, average standard grade, easier, 11/- to 15/-; few selected lines from 17/-.

Mr. E. H. Wragg, secretary of "The Fruit World" Pty. Ltd., is leaving on a business visit to Sydney early in November.

Unbreakable Glass Substitute

"WINDOLITE"

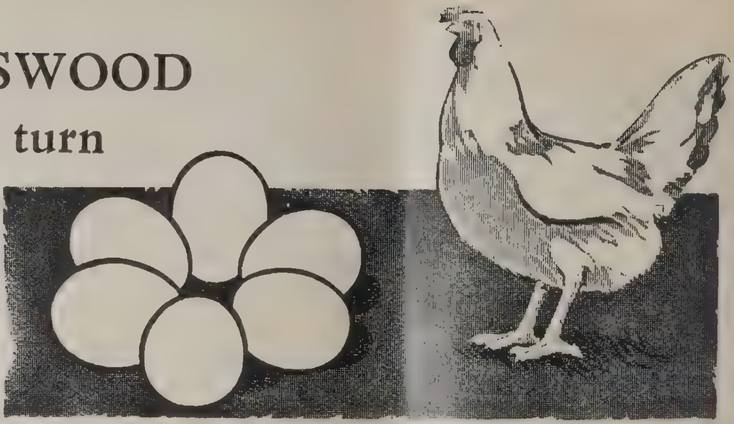
which admits the health-giving Ultra-violet Rays (ordinary glass does not). Of immense value to gardeners and others for seed frames, ferneries, glass houses, handlights, bloom and plant protectors. Keeps out frost and cold biting winds; admits the sunshine and the **growth promoting** rays; prevents scorching and drawing of plants.

Use **Windolite** for verandahs and sleep-outs, in factories, for poultry pens and brooders, and wherever glass gets easily broken. Light, flexible, easy to cut and fix. Stocked by Jas. McEwan & Co. Pty. Ltd., D. & W. Chandler Ltd. (and at Fitzroy); Myer Emporium Ltd.

Retailed in 36 inch width at 9/- sq. yd.

Australian Agents: **C. H. Leaver & Co., 524 Collins St., Melbourne.** Send for sample.

A dash of KARSWOOD in the mash will turn hens into EGG-LAYING MACHINES



The manufacturers of Karswood Poultry Spice do not ask you to accept their word that Karswood is a wonderful egg-producer. They know that the public is always rather sceptical about the claims of a manufacturer for his product. That is why their policy is to publish statements of those best entitled to speak—those people who have used and tested the product. This policy makes the advertisement writer's task an easy one—he can let the other fellow do all the talking. And below are a few samples of how they do talk! Thousands of these letters are received annually, and they all tell the same story: Increased egg-production with Karswood. Yet Karswood does not force, because it contains no forcing ingredients such as cayenne pepper, gentian, chillies, etc.; but it does contain ground insects, the birds' natural tonic stimulant.

"Wonderful Increase in Egg Output"

Gentlemen,

I have used Karswood in England when I was only a "Backyarder." I came out here some 8 years ago to take up Poultry and Pigkeeping. I now have a small flock of 70 hens—about 65 White Leghorns and 5 Black Orpingtons, in their 2nd and 3rd seasons. I keep them in a large run—about ¼ of an acre, and let them out for a run every day for two hours or so. I took up Karswood again on the 26th June of this year. I feed 8 lbs. of pollards wet in the morning with your allowance of spice, and 8 lbs. of wheat at night. After some 8 weeks of this I have had to reduce these quantities to 6 lbs. each. In addition they get a good picking of grass etc. when they are let out, and twice a week they get all the vegetable trimmings from my small stock. Up to the present I have noted the egg yield as follows:

	Last Year	*This Year*
June	253	92
July	242	427
August	679	1166

(The number of hens was the same both years—in fact they are the same birds.) To date the yield for September is in excess of last September; but will write later.

Yours faithfully,

(Sgd.) G. GUMPRICH, Pinjarra,
17/10/29 *Western Australia.*

"Keeps Birds in Splendid Condition"

Dear Sir,

We have been using Karswood Spice for a period of four years. Our fowls are now six years old and last year we had an aggregate of 2,282 eggs from 12 fowls ending the nine months—an average of 7 eggs a day. The Spice keeps the birds in such splendid condition and is very helpful to them during the moult. They are at present looking very well and red and I think they will again shortly be laying so you see people tell you that fowls do not lay after 3 or 4 years old but we have this good proof which should be proof enough. We have found Karswood to be absolutely everything that is claimed for it by the manufacturers and we are more than pleased to strongly recommend it to all our friends and everyone who keeps fowls. Trusting you will use this letter as you wish.

Gratefully yours,

(Sgd.) MRS. J. A. MARCHANT, Lagoon St.,
23/6/29 *Narrabeen.*

Note the Economy

1/- packet supplies 20 hens for 16 days; 2/- packet supplies 20 hens for 32 days; 13/- (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

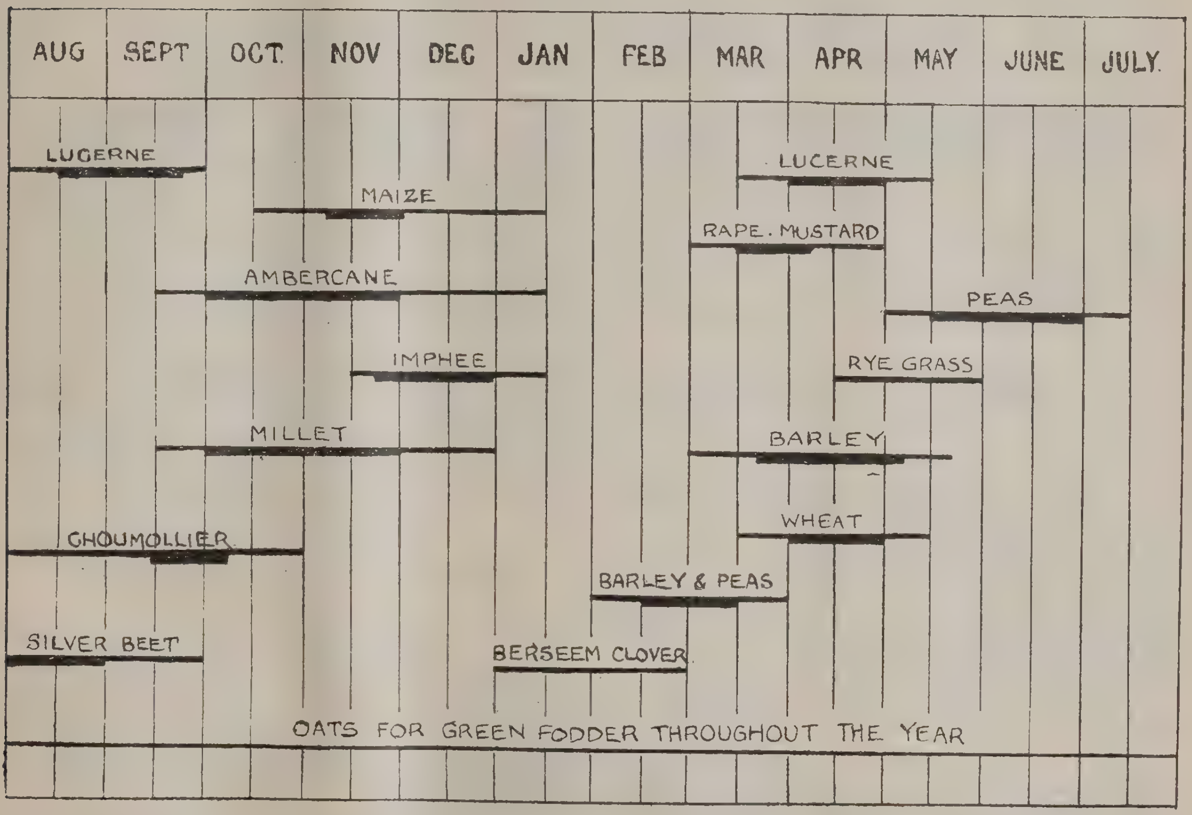
I.M.30

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

GREEN FODDERS FOR POULTRY.

MONTHLY PLANTING TABLE.



T. R. Ward's Australorp Hen, winner Burnley Winter Test, 1928-29, with score of 114 eggs, valued at £1/0/3.

A row of breeding pens at the Woodlawn Poultry Farm, Burwood.

Note nest boxes well off the ground.

GREAT BRITAIN.

London.—Covent Garden (18/9/30).—Apples, N.Z. Sturmer, 7/- to 10/-; Cal. Gravenstein, 11/6 to 12/6. Grapefruit, S. Af., 17/6 to 22/6; Isle of Pines, 25/- to 27/6 per case. Lemons, Messina, 300, 28/- to 35/-; Murcia, 300, 28/- to 35/-; Murcia, 360, 26/- to 33/-; Murcia, 504, 30/- to 35/- per case. Oranges, Brazilian, 14/- to 18/-; S.Af., navel, 16/- to 21/-; seedling, 14/- to 18/-; Valencia, lates, 15/- to 20/- per case. Pears, Cal. Bartlett, 14/- to 16/-; B. Hardy, 14/- to 16/- per case.

Spitalfields (18/9/30).—Apples, Australian and Tas. Yates, 4/- to 5/-; French crab, 3/- to 4/-; Sturmer, 4/- to 6/- box; N.Z. Sturmer, 3/- to 6/- box; Cal. Gravenstein, 12/- to 13/- box. Grapefruit, Isle of Pines, 22/6 to 27/6; Cal., 20/- to 25/-; S.A., 18/- to 26/-; Argentine, 22/- to 24/- case. Lemons, Messina, 300, 20/- to 27/-; 360, 18/- to 30/-; case, 300, 24/- to 30/-; Naples, 300, 20/- to 30/-; Murcia. 20/- to 30/- case. Oranges, Valencia, late, 17/- to 20/-; Brazilian, 17/- to 22/-; S.Af., 16/- to 22/- case. Pears, Cal. Bartlett, 12/6 to 14/6 box; Cal. B. Hardy, 14/- to 16/- box.

PEACHES, PEARS AND PLUMS IN COLD STORAGE.

In his address before the recent Fruitgrowers' Cool Stores Association Conference, Mr. G. B. Tindale, B.Ag.Sc., Cool Storage Research officer, presented some very interesting details.

In the report which appeared in our last issue, on pages 389 and 390, some of the type was misplaced. Dealing with pears (page 389), the tabulated notes, commencing with No. 1, should have been continued with Nos. 2 to 9, which, however, appeared after "Plums," at the end of the article.

To make the position quite clear, we now publish the information as it should appear:—

Table 4.

The behaviour of William Pears, after eight weeks' storage at various temperatures, is given hereunder, showing (a) condition on arrival; (b) condition after ripening at room temperatures of 60-70 deg. F.

1. 31 deg. F. continuously—(a) Skin green, flesh normal; (b) ripened normally. Full development of flavour and lusciousness.

2. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 31 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

3. 34 deg. continuously—(a) skin dingy green, flesh normal; (b) appeared to ripen normally. Slight falling off, however, in flavour and lusciousness.

4. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 34 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

5. 37 deg. continuously—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

6. Storage delayed for 2 weeks at 40 deg., then 6 weeks at 37 deg.—(a) skin yellow, showing scald, flesh mealy; (b) all scalded. Flesh collapsed.

7. 40 deg. continuously—(a) skin bright yellow, many scalded, flesh mealy; (b) all scalded. Flesh collapsed.

8. 43 deg. continuously—(a) skin all scalded, flesh collapsed.

9. 46 deg. continuously—same condition noted as in No. 8.

By storing at 31 deg. F., or even lower, William Pears can be kept green for 8 weeks, and on removal to temperatures of 60-70 deg. F. will ripen normally.

With Peaches and Plums at 31 deg. F., the maximum life was approximately 8 weeks.

CANNED FRUIT INDUSTRY.

A Serious Situation.

Messrs. J. McDonald, S. P. Cornish and Lenne, representing the Northern Victoria Fruitgrowers' Association, recently interviewed the Minister in charge of Water Supply, pointing out the serious position of the canned fruit industry, and urging that the water charges be not increased. The deputation stated that the production of canned fruit this year was over 45,000,000 tins, of which only 15,000,000 tins would be consumed in Australia. The price offered for export was 4/9 per doz., f.o.b., while the costs of production were around 8/- per doz. The Minister, in reply, stated that the burden on the general taxpayers was steadily increasing; the loss on water schemes last year was £740,000. The State could not continue to pay £4/14/6 per cent. interest and charge users £4 per cent. The Government realised that settlers were having a hard struggle, and would review the position very seriously before taking any action.

IMPERIAL ECONOMIC CONFERENCE.

No Further British Preferences.

Despite the earnest efforts of Dominion Prime Ministers at the Imperial Economic Conference in London, the British Government has not acceded to the request for additional preferences for empire products. Summed up, the requests were for Great Britain to impose taxes on goods from foreign sources, allowing Empire products to enter without duty.

While the Ramsay MacDonald Government has thus declined to tax foodstuffs, the leader of the Conservative party, Mr. Stanley Baldwin, has announced a policy of Empire preferences which will be placed before the people at the next election.

The Australian Prime Minister, Mr. Scullin, while regretting the non-success of his mission regarding preferences, believes that the way has been cleared for better trade relations and the foundation laid for closer Empire unity in the future.

SOUTH AUSTRALIAN FRUIT-GROWERS AND MARKET GARDENERS' ASSOCIATION.

Much useful work is being accomplished on behalf of growers by the South Australian Fruit-growers and Market Gardeners' Association. Branch delegates are as follows:—Campbelltown: Messrs. H. E. Pitt, N. T. Hobbs and Howard Hobbs. Marion: Messrs. S. Walker and M. G. Franklin. Balhannah: Mr. W. W. Miller. Central: Messrs. F. Staniford, W. McKerlie, T. A. Trebilcock, R. E. Townsend, C. E. Hocking, W. M. Hicks, F. G. Gill and H. B. Robson. Lenswood: Mr. H. H. Schultz. Houghton: Mr. A. E. Brealey. Cudlee Creek: Mr. F. W. Schultz.

THE HEART OF INDUSTRIAL ENGLAND

which embraces nearly the whole of Lancashire
. . West Yorkshire and the Midlands . .

HAS A POPULATION OF ABOUT 12 MILLIONS
ONE OF THE WORLD'S GREATEST MARKETS!

THE PORT OF MANCHESTER

IS NEAR ITS CENTRE

and is the cheapest distributing point for reaching this vast population

IMPORTED PRODUCE consumed yearly in this area includes:—
66,000 tons Apples 60,000 tons Butter 33,000 tons Cheese 600,000,000 Eggs

Ship Direct to Manchester Docks

and reduce handling and distributing costs to a minimum

For particulars of port and forwarding charges, etc., apply to—

Cables and Telegrams—
Portoman, Sydney.

CAPTAIN W. J. WADE,
Representative Manchester Ship Canal Co.,
8 Bridge St., Sydney, N.S.W.

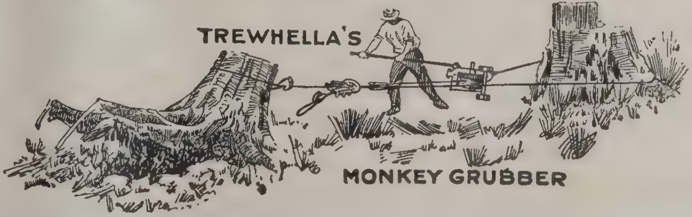
ARE YOU GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was

THE "MONKEY" GRUBBER.

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit

"REMEMBER FOR YOUR GRUBBING THERE'S ONLY"



H. H. HINDS LTD.,
Kent Street, Sydney.

A. G. WEBSTER & SONS
Hobart and Launceston.

A. ROBINSON,
549 Queen St., Brisbane

Leading Stores and Merchants, South and West Australia.

TREWHELLA BROS. Pty. Ltd. Trentham, Vic.

APPLES & PEARS

Volck was again successful in the 1930 Government Codlin Moth Control Tests. In Mr. W. A. Thiele's Orchard, Volck Sprayed fruit was superior to fruit sprayed with any other spraying material. *VOLCK secured Mr. Thiele's order for his 1930/31 sprays!* In Mr. Petty's Orchard, both the fruit and the foliage were superior. Mr. Petty regarded the result as most satisfactory, and *placed his 1930/31 spray order for* VOLCK. Thus the owners of both tested orchards have shown a preference for VOLCK—a preference in which they are backed by the official result of the test as reported in the *Journal of Agriculture* for September, 1930. Free copies on application.

Volck was also successful for the third year in succession in the official HARCOURT Codlin Moth control tests, thus 1928—1929 and 1930 have been VOLCK YEARS at Harcourt!

Let us send you copies of letters from growers in all parts of the State—Pomonal, Tempelstowe, Ardmona, Irymple, Officer, Bamawm Extension, Sedgewick, Wangaratta, Mildura, etc. They all show that there is in the opinion of the practical orchardist . . . NO SUBSTITUTE FOR VOLCK.

VOLCK PRODUCTS ARE:—

VOLCK. . . . ORTHOL-K. . . . Volck's ORTHO Arsenate of Lead. . . . Volck's DEL MONTE LIQUID SPREADER. . . . And Volck's one package BORDEAUX.

PRICES:

Volck, 8/- gal.
Orthol-K, 7/6 gal. } F.O.R. Melb.

Write us also for;—

All kinds blood and bone fertilisers, including Dried Blood, Blood and Bone Mixture, Bone Dust, and other animal fertilisers; also NICOTINE SULPHATE.

VOLCK

The Proven Spray !

CITRUS FRUITS

In a letter dated 6/10/30, the Irymple Packing Pty. Ltd. pay a remarkable tribute to VOLCK, by stating that the four FIRST PRIZES secured by them at the Royal Show, were secured with VOLCK sprayed, Washington Navel Oranges, Volck Sprayed Lemons, Volck Sprayed Valencia Oranges and Volck Sprayed Citrus Packing. In addition they secured three second prizes—for Mandarins, Mediterranean Sweet Oranges and Grape Fruit—all with VOLCK sprayed fruit! In addition to the successes of the Irymple Co., in all thirty-one FIRST PRIZES were secured by growers who use VOLCK to protect their fruit from pests and to improve its size and coloring.

Let us send you Illustrated and informative literature regarding Volck successes in Victorian CITRUS AREAS.

One firm, writing to us recently, stated that in its particular district VOLCK had become generally accepted by growers as the standard spray, and that with it, growers had achieved wonderful success.

WRITE FOR FURTHER DETAILS TO:—

Victorian Agents.—H. C. Pannifex & Co., 26a Market-street, Melb.

N.S.W. Agents.—The Australian Fruit and Produce Co., Fruit Exchange, Sydney.

Queensland Agents. — The Australian Fruit and Produce Co., Fruit Exchange, Brisbane.

Tasmanian Agents.—W. H. Ikin & Son, Hobart.

South Australian Agents. — Silbert, Sharp, and Bishop, Rundle-street, Adelaide.

West Australian Agents.—Paterson & Co., Perth.

Agricultural Bureau System

Appreciation from South Australia.

Also Successful in N.S.W. and Tasmania.

THE BENEFITS ACCRUING from the Agricultural Bureau in South Australia, formed the subject of an interesting paper by Mr. G. Seidel before the Bowhill branch of the Bureau recently. The Agricultural Bureau, stated Mr. Seidel, was the connecting link between the efficient Department of Agriculture and the producers generally, and was directly responsible for creating a wider interest among producers to avail themselves of the many successful experiments which had been conducted. The Department of Agriculture in South Australia had experts in wheat and cereals, dairying, wool, fruitgrowing, poultry, livestock, and every branch of agriculture.

Any member of a Bureau could obtain expert advice free of charge,—a privilege often passed over lightly.

Some had said that the practical experience of over 20 years should be sufficient, and was just as good as listening to an agricultural instructor. Yet these same men were using the very methods which had been determined by scientific research and tests extending over many years.

The average producer had still a lot to learn. Not only was the information from trained lecturers of value, but also the practical discussion which arose at the meetings. At these meetings all matters—including political matters—affecting the welfare of the man on the land were discussed. The Agricultural Bureau brought district producers together in a helpful way.

. . . .

It is interesting to publish the foregoing appreciation of the Agricultural Bureau system from South Australia. New South Wales and Tasmania have also proved the value of the Agricultural Bureau.

South Australia

Apple Crop Light.

6/6 to 8/- Offered for f.o.b. Sales.

The general manager of the South Australian Government Produce Department (Mr. G. A. W. Pope) stated on October 29, that the Trade Commissioner for South Australia in London (Mr. R. M. K. Lewis), had cabled the following offer for standard grade Apples, f.o.b.:—2,500 cases Cleos. at 8/-; 5,000 Jonathan, 7/-; 5,000 Stone Pippin, 7/-; 2,500 Rome Beauty, 6/6. Shipment to be made during March and April, 1931.

Growers generally are reporting to the Department that although the trees blossomed fairly well, the fruit was setting very poorly, and the State will experience a very light crop.

Growers are, however, invited to participate in the filling of the above orders by communicating with the Department.

The good salesman has recognised the pitiful waste there is in trying to sell an unadvertised product—a product which is not two-thirds sold—before he approaches the customer.

"VALLO" Sprays ensure an abundant and luscious crop

"Vallo" Nicotine Sulphate

We are the first and only manufacturers in Australia of this product, which is in every way equal in quality to any imported brand.

This spray is scientifically prepared by an improved process for the purpose of destroying aphis, thrip and similar soft-bodied sucking insects.

"Vallo" Arsenate of Lead

is manufactured in Australia from Australian raw materials, and has been specially prepared to comply with Australian conditions.

Of highest chemical efficiency, the particles are finer than any grinding could possibly make them. It is noted for its suspension and adhesive qualities which fix it to the fruit and foliage.

"Vallo" Arsenate of Lead Powder contains a spreader.

"Vallo" Prepared White Oil.

The maximum killing effect, derived from the use of "Vallo" Prepared White Oil, will reduce the number of sprays necessary to control the codlin moth, and lessen the percentage of residual arsenic on the fruit when picked.

Citrus growers have found "Vallo" Prepared White Oil indispensable for the control of all scale insects, particularly Black Scale and Red Scale.

Other well-known "Vallo" Sprays are:—

"Vallo" Lime Sulphur Wash;

"Vallo" Prepared Red Spraying Oil;

Dry Bordeaux Home Made
6—4—40
4—4—40

Further information of "Vallo" Sprays is contained in a folder which will be forwarded free on request.

VICTOR LEGGO & FARMERS LTD.
218-222 Queen St., Melbourne
Agents all States Sydney, Brisbane

CODLIN MOTH CONTROL

Recent Tests in Victoria

Show Outstanding Success of

"Elephant" Brand

Arsenate of Lead and White Oil

Owing to one of our competitors objecting to us publishing the whole of the official figures in connection with the tests carried out by manufacturers and others under the supervision of the Agricultural Department, we wish to refer orchardists to the July, 1930, issue of the "Victorian Journal of Agriculture," where full details are published.

NOTE—Elephant Brand Sprays gave the highest percentage of clean fruit at the lowest cost of application.

Why Buy Imported Arsenate of Lead and White Oil.

PRICE IS COMPETITIVE — QUALITY STANDS ALONE

Remember :—"ELEPHANT" BRAND is Made in Australia

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TRADE WITH THE EAST.

Mr. W. Ranger, Manager, Committee of Direction of Fruit Marketing, Brisbane, has been appointed to go to the Near East to study the prospective markets for Australian fresh fruit. Mr. Ranger is due to visit Shanghai, Hongkong, Java, Singapore, British Malaya, and other places.

DUTY ON SOFTWOOD CASES.

Deputation Representing Fresh and Canned Fruit Request Lessened Outlay on Duty.

WHEN DELEGATES from the Victorian Fruit Marketing Association and of the Goulburn Valley canneries, waited on the Acting Minister for Customs (Mr. Forde) recently, many strong arguments were adduced in favor of an alteration of the present arrangements regarding duty and drawbacks on imported softwood shooks for fruit cases..

The following facts were forcibly set forth:—

The November increase in duty on timber cut to size for making boxes, i.e.: Item 291 I, 5/- to 12/-; Item 291J, 6/- to 14/-; involves a considerable increase in duty on fresh and canned fruit cases amounting to nearly £30,000 annually, which sum is held by the Government and refunded when exported.

The following is an approximate statement of the position:—

		Duty. Item 29112 12/- Item 291J 14/-	Duty. Item 404 10%	Difference.
Dried Fruit ..	£2,000,000	£30,000	£2,400	£27,600
Apple & other Fresh Fruit .	1,100,000	20,000	1,600	18,400
Canned Fruit .	600,000	10,000	800	9,200
				£27,600

Interest, four months at 8 per cent. (average time in Australia before re-export), £730.

Whilst the interest cost has been set out at £730, this has been calculated upon the entire stocks being used for the season in which they are imported. Often times there is a considerable carryover from one year to another, and this would take the figure to well over £1,000.

This heavy outlay is particularly embarrassing to the producers, and the request was made that all fruit cases. whether for fresh or canned fruit purchased for re-export, be permitted entry under Item 404 under security **as is at present granted to dried fruit boxes.**

There appears to be no just reason why the Government should not permit importation of all fruit cases under 10 per cent. ad valorem, under security that same will be re-exported. The Customs authorities accept bank guarantees that the dried fruit cases will be exported and similar guarantees could be given to the Customs in connection with all fruit cases, whether Apples, Pears, Citrus, other fruits, canned and dried.

* * *

The deputation was introduced by Hon. W. C. Hill, M.H.R., the delegates in attendance were Messrs. H. G. Colombie (President Victorian Fruit Marketing Association), J. B. Mills (Vice-President, representing South Australia), C. M. Griffeth, G. W. Brown, F. R. Mellor, S. G. Tucker (representing Tasmania), Gent (Goulburn Valley Canneries), W. Gregory, and R. E. Boardman (Secretary V.F.M.A.).

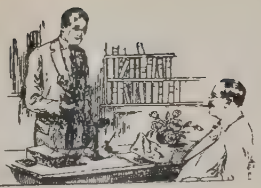
* * *

The Minister gave a sympathetic reply, stating he had been impressed by the arguments put forward, and he would take the matter favorably to Cabinet.

* * *

LATER—The request of the deputation has been granted and the new schedule gazetted.

Editorial Chats



THE IMPERIAL CONFERENCE.

The Imperial Economic Conference has concluded its important sessions. The high hopes for increased British preference on Empire goods have not materialised. However, the various Dominions have got closer together on these matters of big policy resulting in mutually better understanding of Empire problems.

One fear has been dispelled—that the present preferences might be withdrawn. These preferences have been renewed for three years.

Two other factors have evolved—(1) The great swing of public opinion in Great Britain in favor of Empire preference; and (2) the leader of the Conservative Party (Mr. Stanley Baldwin) has announced his definite approval of increased preferences for the Dominions.

DUTY ON SOFTWOOD SHOOKS.

The request recently made by the Victorian Fruit Marketing Association and fruit canning interests to the Minister for Markets regarding the duty on imported sofwood shooks is quite reasonable.

The duty was raised from 2d. to 5d. per case, with the proviso that the duty would be refunded when the cases were exported. This applies to shooks for fresh and canned fruits. However, for dried fruits the duty is only 10 per cent. ad valorem.

Representatives of the fresh and canned fruit industries recently waited on the Acting Minister for Customs, requesting similar conditions to those which apply to the dried fruit industry.

At present the outlay for duty on cases is very heavy: no rebates are obtainable for about four months, and when cases are stored it may be 18 months before securing the drawback. In the meantime interest charges go on piling up.

The request is that cases for the fresh and canned fruits be permitted entry under tariff item 404 (10 per cent.)—as for dried fruit boxes.

The granting of this request would make the position equitable and would be warmly appreciated by fruit producers.

INTERSTATE CONFERENCE ON EXPORT.

The Interstate Conference on Apple and Pear export, convened by the Victorian Fruit Marketing Association, is fraught with possibilities of great good. This Conference opens on December 10, and the subjects discussed will include the formation of an Australian Apple and Pear Export Association (a draft constitution for which has been prepared), 1931 export, freight rates and contracts with shipping companies, cases, grading regulations, interchange of inspectors, etc.

The fact that a Committee has been formed in Great Britain to assist the Australian fruit export industry is a matter for much satisfaction.

The Australian fresh fruit export trade is already a substantial enterprise. By mutual co-operation between the exporting States, many of the difficulties which confront the trade can be overcome, and it would appear that the way is steadily and surely being prepared for a satisfactory solution of all problems and a profitable increase in the important business of export.

WASTAGE IN CITRUS FRUIT.

Careful Handling Imperative.

In a recent report (No. 38) of the Food Investigation Board, England, dealing with wastage in imported fruits generally, considerable space has been devoted to a study of this problem as connected with citrus fruit.

With the exception of slight losses from a physiological disease in Australian fruit, the wastage in imported Oranges is entirely due to fungal rotting, states the report, and especially to rotting by two species, which produce the so-called blue and green moulds.

Rotting is the cause of heavy losses in Oranges from Spain, Palestine, Brazil, and Australia. There are no figures for the wastage in Spanish Oranges, but in Oranges from Palestine the wastage in the 1927-28 season was reported as 3.4 per cent. of the total export. Observations have also been made of the rate of deterioration in Oranges from Palestine which were slightly "wasty" on arrival in England, and rapid further wastage has been noted.

Benefits of Careful Handling.

In the past, heavy wastage has also occurred in shipments from South Africa and from America, but it has been greatly reduced by careful handling and orchard sanitation and by rapid transport at a low temperature as soon after packing as possible. Nevertheless, serious wastage still occurs in certain marks of South African navel Oranges, particularly towards the close of the season; in a bad season, e.g., 1929, the wastage may even be heavy in the early shipments.

The most careful handling during picking and packing, so as to avoid bruising the skin and thus promoting the development and penetration of the fungus, is of paramount importance. The reduction of the sources of infection by the removal of all rotted Oranges from the groves and packing houses is also desirable.

The heavy wastage in South African Oranges in certain seasons is not likely to be due to careless handling, etc., and must presumably be related to the peculiar susceptibility of the fruit to infection.

In a few small consignments of Oranges shipped from Australia during the last few years, most of the wastage has been due to mould, but occasionally damage to the skin, in the form of patches of brown discoloration of small brown pits, has been seen.

In 1922-23, a similar disease was prevalent in South African Oranges, and experiments showed that it was due to storage at a temperature below 38 deg. F., since it did not appear at higher temperatures. There is little doubt that the browning of the Australian Oranges shipped to England was due to the use of too low a temperature (34 deg.-36 deg. F.). It may, perhaps be suggested that the wastage from mould in Australian Oranges is in part due to the injurious effect of too low a temperature of carriage.

Electro Horticulture in Sweden.

(By R. Wilkinson.)

AS EARLY as 1880 experiments were made in England by Sir William Siemens on the effect of illuminating plants by electric light. Sir William found that he could cause Tulip buds to blossom after a few hours illumination, and he prophesied that in the future gardeners could easily enough become independent of natural sunlight, and regulate the plant's light requirements as they wished. In 1920 a Norwegian engineer, Georg Jacobsen, observed that electric power cables were discernible on the landscape by means of the strips of green grass on the hillsides. These are the two fundamental observations which led to the application of electricity to horticulture.

Scientific men the world over are interesting themselves to-day in the problem of light in relation to plant growth. They measure it in forests; they separate it in laboratories into its component parts; they discover mysterious and complicated relationships where none were suspected before. But in Sweden rather more serious consideration has been given to the subject than in other countries, and very encouraging results have rewarded their efforts.

Some of the electrically heated hotbeds in the garden of the Royal Academy of Agriculture, near Stockholm.

In 1925 a committee was appointed by the Royal College of Agriculture to investigate the possibilities of applying electric energy to assist plant growth. Just outside Stockholm a little "science town" known as the Experimentalfaltet has sprung up, and it is here that Professor Sven Oden and his collaborators have made use of the observations of earlier workers, and carried their experiments to successful fruition.

Light Assists Growth.

Some very interesting results, particulars of which have recently been published, have been obtained. Bulbs were made to develop much more rapidly than would otherwise have been possible. Irradiated Raspberry bushes produced fruit in February, that is in the middle of the sub-Arctic winter. Cucumbers were ripened in November, and presented to King Gustaf's Christmas table in 1926. Sugar beet seeds to be used in experiments in strain crossing were produced in the winter season, crop after crop from the same roots without the necessity of waiting the usual long winter resting peri for fruition. It has been found that cucumbers respond to the treatment in a remarkable way. From four and a-half to five weeks under hot-house conditions are ordinarily required to produce marketable fruit from the time the young plants are planted out. With the help, however, of a few hours daily of artificial light, the time was reduced to three weeks.

Light treatment enabled an excellent crop of table Grapes to be ripened in sixteen months after the vines were planted.

The problem of a general economic application has yet to be solved. In the first case ordinary light bulbs are constructed with the light requirements of the human eye in mind, and these requirements by no means correspond to those of green plants. A light nearer the red end of the spectrum has been found in most cases to be more efficient for the building of plant tissues in cells. The cost of electricity is also a consideration in that most authorities charge more for energy used for lighting than is charged for heating purposes.

Artificial irradiation of plants is, however, not the only possibility which the Experimentalfaltet offers to the horticulturist. Light work is still in the experimental stage, but

electrical heating of the soil

has passed its infancy, and its future is assured—at least as far as Scandinavia is concerned. Soil heating cables have now been perfected, and soil heating as an industry is about to be launched on a large scale. Some nine hundred Swedish gardeners and florists have ordered installations of electric soil heating equipment. Apart from greenhouse heating the heating cables may also profitably be installed in unprotected ground with a view to forcing spring vegetables in April, May and June.

Ripe Grapes in greenhouse of Experimentalfaltet, sixteen months after the vines were planted.

The sun in April has considerable power, though the ground may be snow covered or frozen until May. With heat cables to thaw it, and keep it at a proper temperature, there is no reason why lettuce, spinach, radishes and other vegetables may not be planted as early as the first week in April, and thus be ready for market a full month and a-half earlier than otherwise. For the family with a kitchen garden this offers great possibilities as the equipment can be bought in Sweden for as little as £4, and a low night rate for electricity is available.

Electricity for Hot-beds.

By far the greatest possibilities of the soil-heating cable lie in the cultivation of plants in the hot-bed. Previously a rotting mixture of manure and straw supplied the heat necessary for the maintenance of temperature. The heating cable has many advantages over the old method: the temperature may be regulated more exactly; it may be kept constant throughout the whole year; it does not require periodical renewal and the labor costs are negligible—all this in addition to the certainty of results regardless of climatic conditions. One grower near Stockholm has 21,000 sq. ft. of electrically heated hot beds, wherein for four years he has grown radishes, lettuces, spinach, melons and Strawberries for the early spring market. He is able to support with figures his contention that electricity is cheaper. The original installation cost of the electric hot beds was 6/3 each. The annual cost for electricty is 4/2 each. He previously spent 5/6 per bed for manure and straw, and he has now eliminated troubles from soil fungus. Naturally he predicts a wonderful expansion of the use of the more modern method.

Tomatoes for Pulping.

Most Suitable Varieties.

Interesting Notes from New South Wales.

ALTHOUGH LARGE AREAS of Tomatoes are cultivated in New South Wales for the supply of Tomato pulping factory requirements, little attention has been paid to the pulping qualities of the various varieties in cultivation, observes an article on this subject in the "N.S.W. Agricultural Gazette." The author is the chemist of a leading firm of jam manufacturers and pulp producers, and in putting on record the results of his investigations presents data of importance to a large number of growers of this crop.

The Tomatoes were grown at Bathurst Experiment Farm. It may be pointed out that the range of varieties that may be grown on the tablelands is limited, and that under coastal conditions certain later varieties may prove even more satisfactory from a pulping point of view.

The experiments were conducted to determine the suitability of varieties for sauce manufacture as indicated by their total solid content, soluble solid content, and the proportion of skins and seeds, and also the effect of irrigation upon solid content. The procedure adopted was to pulp a given weight of each variety by the ordinary factory process, boil for half an hour, and then dilute the resultant pulps all to the same volume. This pulp was sieved by a rotary sieve, and the total skins and seeds extracted, being of approximately the same moisture content, were weighed for comparison. The pulps then obtained were compared for color, and representative samples were taken and tested: (a) for soluble solids, and (b) for total solids. In all cases 70 lb. of Tomatoes were made into 8 gallons of finished pulp, or, if smaller weights of Tomatoes were taken, a corresponding yield of finished pulp was arranged.

The varieties came in the following descending order as to the amount of solids they contained:—

Soluble Solids.	Total Solids.
Norduke.	Marglobe.
Norton.	Columbia.
Columbia.	Norton.
Money Maker.	Feilen's Selected.
Marglobe.	Bonny Best.
Bonny Best.	Repeater.
Chalk's Early Jewel.	Money Maker.
Feilen's Selected.	Norduke.
Repeater.	Chalk's Early Jewel.

The percentage of skins and seeds did not vary sufficiently to give any of these varieties preference over any of the others. In order of brightness of red color, the varieties came as follows:—Marglobe, Columbia, Norton, Norduke, Bonny Best, Money Maker, Feilen's, Chalk's Early Jewel, and Repeater. With regard to color, says the writer, Repeater must be classed as very inferior. Marglobe and Bonny Best had very little core. Feilen's Selected, grown on high ground, showed a higher percentage of solids than when grown on irrigated ground.

It is not possible to arrive at the true value of any variety from the appearance of the fruit, concludes the article. In the case of Repeater one might reasonably expect a satisfactory pulp, but the poor color is quickly manifest on cooking. Apart from color, the percentage of total solids is of great importance to the manufacturer, and on the results obtained it will be noted that Chalk's Early Jewel, Norduke, Money Maker, and Repeater gave a low yield. The cultivation of these varieties for pulping purposes should be curtailed in favor of such well-known varieties as Marglobe, Columbia, Norton, and Bonny Best, for instance, which give a higher yield of total solids, and at the same time produce a pulp with a desirable color.

Somerville.—A meeting of fruitgrowers was held on November 1, when addresses were given on the subject of fruit export by Mr. E. E. Meeking (Department of Agriculure), Mr. H. G. Colombie, and Mr. C. J. Parnham (Victorian Fruit Marketing Association), all three having recently returned from a visit to Great Britain and the Continent.

There was a large attendance of growers, and great appreciation was expressed for the information conveyed. Many questions were asked and answered, and the growers who were present subsequently stated that it was one of the finest meetings ever held in Somerville.

Specialty Investments Pty. Ltd. proffers cordial thanks for numerous transactions for the year, and will greatly appreciate the privilege of continuing to meet the deserving needs of those in the industry. Leading the trend to lower interest, the company's unrivalled resources are now being advanced at keener rates than for some years past.

Their conspicuous advantages, backed by a service of unremitting courtesy and promptitude, make financing today a pleasure and economical experience.

"How is your daughter getting on with the piano?"

"First rate. She can play with both hands now. Her teacher says that she will be able to play with her ear in six months."

Fruit Crop Estimates in South Australia.

Issued November 11, 1930.

Apples About 20 Per Cent. of Normal: Pears Light: Stone Fruits and Grapes Medium.

Compiled by Geo. Quinn, Chief Horticultural Instructor, from Reports of District Horticultural Instructors.

NORTH of Adelaide in the **Barossa, Clare, and Wirrabara areas,** the Apple crop is very light, excepting in a few isolated instances, where the yellow varieties—mainly Cleopatra—are fair; around Williamstown a few from fair to medium crops of coloured sorts are seen. Pears are light in all varieties, including the Williams. Quinces and Nectarines are light. Peaches are only medium to light, varying with the sorts—very few clingstone sorts are grown. Most sorts of European Plums are light, a few Japanese sorts alone showing a fair crop. Prunes are medium, and a few trees here and there heavily cropped, being noticeably better than other sorts. Apricots are patchy; some trees good; others practically fruitless. On the whole, they will be well below normal. Almonds are mostly cropping well.

Zante Currants crop is mostly light; apparently lighter around Clare than in the lower Barossa areas. Wine Grapes are showing quite good average crops in some vineyards; in others, patchy, from the effects of past drought. The general average will probably prove below normal, though prospects have been much improved by good late spring rains. Oranges and Lemons are flowering and forming good crops, but many will fall in due course. Expect normal yield.

In the **Mount Lofty Ranges,** Apples have set a very light crop, though the principal export varieties—Jonathan, Cleo., Dunn's and Romes—blossomed well in most orchards.

The yield is estimated in this, our principal Apple-producing area, at about 20 per cent. of a normal yield.

Pears are patchy, the Williams being from light to fair only. The crop is probably 40 to 50 per cent. below normal.

Plums of Japanese sorts are very light, and most European varieties patchy. Good crops are showing on trees of Kirk, Greengage, Grand Duke, Giant Prune, D'Agen, Splendor, and old dark French Prune varieties.

Cherries are mostly light; Early Lyons alone being quite good. The crop generally is estimated at 75 per cent. of normal. Amongst berry fruits, Gooseberries are good; Raspberries and Loganberries promise well. Strawberries are promising good yields. These small fruits are only grown in quantities appropriate to local needs.

On the **Adelaide Plains and southern areas,** Apples are promising a medium to light yield. Apricots generally are fair to good; Nectarines good; Peaches fair; and Pears fair. Plums of most varieties are promising fair to good yields. Almonds, good average. Tomatoes, good yields generally in glasshouses.

Citrus trees have bloomed freely, considering their drought debilitated condition, but the character of the crop of new fruit is problematical at present. Some of the later sorts, such as Compuda and Late Valencia, have still a fair quantity of marketable Oranges hanging.

Grape vines of all sorts are looking well, and, judging from the bunches of flowers, there should be a medium crop borne in most vineyards.

In the **South-Eastern districts,** Apples have blossomed remarkably well, but the setting is distinctly poor, more particularly among the principal export varieties. Apricots (at Coonawarra) promise a good average yield, and the same remark applies to Peaches. Pears are patchy, some sorts fair only, but on the whole not above 75 per cent. of a normal crop. Plums and Prunes have a normal crop, and Almonds are fair.

In the irrigated areas of the **Murray Valley,** Apricots generally are showing heavy crops, and owing to spring rains a fair amount of shothole fungus is noted on the fruits. Nectarines and Peaches (Elberta) are mostly well laden. Pears (chiefly William's Bon Chretien) are again promising fair yields, and Prunes, though not largely planted, are showing for good yields in some settlements. Almonds are carrying good crops.

Orange trees have bloomed profusely, and are looking remarkably well for the coming crop. Generally speaking, a very important awakening in respect to the fertilising of citrus trees has taken place in these areas during the past three or four years, and the trees are now responding in proportion.

Amongst Grapes, the Sultana crops are much below average, and look like very little above a 50 per cent. normal yield being gathered. Zante Currants are up to average, and Gordos promise to exceed normal quantities. Doradillos are irregular, and mostly only fairly well cropped.

BLACKWOOD.

Mr. Rodney Fowler, manager of the State Experiment Orchard at Blackwood, South Australia, sends the following interesting notes under date November 12:—

The principal fruits in this locality are:—

Apples.—Cleo., Jonathan, Dunn's, with a few Romes and Stone Pippins.

Pears.—Williams or (Duchess) mostly, some Glou Morceau, Packham's Triumph, a few Josephines, Winter Nelis, and other varieties.

Peaches.—Not grown extensively, mostly for fresh fruit market.

Nectarines.—Not grown extensively, mostly Goldmine or Newboy.

Apricots.—Moorpark, for factory or fresh fruit market.

Plums.—Grown to slight extent, mostly for fresh fruit market or factory.

Crop Prospects.

Apples.—Light generally, fair in places. Jonathans 20 per cent., Cleopatra 20 per cent., Dunn's failure; other varieties very light.

Pears.—Practically a failure. A fair crop appeared to set in places, but there has been a very heavy drop.

Almonds are carrying good crop.

Cherries.—Fair to good; not grown to any extent.

Very little, if any, new planting is being done. One or two old orchards are being rooted out.

Cultural Matters.

Growers are keenly interested in the question of control of codlin by white oil sprays, the application of fertilisers, particularly nitrogenous manures applied in the autumn, and alternate cropping of Apples.

Questions which one hears frequently asked are:—

Can anything be done either by pruning, manuring, thinning, etc., to ensure a more regular crop of Apples?

At what time in the tree's growth does the wood bud change into the potential flower bud?

Is there any relation between the number of leaves to the flower bud and the number of fruits that will set on that particular bud?

[The experiences of readers on the foregoing subjects would be appreciated.—Ed., "F.W."]

RENMARK NEWS.

Conditions in the Renmark area have been favourable to vigorous growth in vines and trees this season.

Sultanas are light—will not be more than a 75 per cent. crop.

Currants are heavy, and should be equal to last year.

Gordos are showing an average crop, but with this variety the crop is not determined until after setting. A large number of bunches is sometimes disappointing at setting time, and a good setting often compensates for a poor showing of bunches earlier in the season.

The Doradilla is a problem not easy to solve. This variety, which is extensively grown on the Murray River, is only suitable for the manufacture of proof spirit and brandy, and as spirit storage is full from last year's vintage, there is a posibility of many, if not all being left on the vines, unless some use can be found for them other than that for which they were originally planted.

The first spraying for Codlin Moth has been completed. Pears (mostly of the Duchess variety) are chiefly grown for drying. Codlin moth has been, and still is, a very big problem. Owing to our summer heat, broods keep on emerging throughout the season. As many as five sprayings have not insured a reasonably clean crop.

The second irrigation commenced on Monday, October 20th.

The soil survey undertaken by the Council for Scientific and Industrial Research, which is being done through the Waite Research Institute (Adelaide) is almost completed, and should yield some interesting data. This survey, which embodies the whole of Renmark Irrigation Area, Block "E," chiefly comprises some 7000 acres.

Mr. A. V. Lyon, who is in charge of the Merbein Experimental Station, was recently in Renmark making "soil penetration" tests. These experiments determine the water penetration on various types of soil in a given time. He will visit Renmark during each irrigation throughout the season.—Renmark Correspondent.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

THE monthly meeting of the Executive of the S.A. Fruit Marketing Association was held on October 31, Mr. H. J. Bishop presided over a satisfactory attendance.

Regret was expressed at the resignation of Mr. D. Blyth, who is leaving Adelaide. Mr. Blyth was a foundation member of the Association and of the Executive Committee, and also trustee and sealholder in connection with the incorporation.

Apple and Pear Export Association. — Correspondence was received from the Victorian Fruit Marketing Association in reference to a proposed conference to be held in Melbourne during the first week in December. It was unanimously decided to be represented at the conference, and the President, Mr. H. J. Bishop was appointed as the exporters' representative, and Mr. J. B. Randell, J.P., of Gumeracha, as the growers' representative. It was felt the time is ripe for the formation of an Australian association to co-ordinate the work of the respective State bodies.

Pear Shipments.—It was resolved to write all country delegates, asking them to supply for November 21, a report in regard to crop prospects for the coming season for both Apples and Pears, and also to ascertain whether growers desire to ship "Duchess" or other varieties of Pears during next season.

Mr. F. B. James, of Blackwood, and Mr. R. O. Knappstein, of Clare, read interesting papers in regard to the best method to adopt in connection with packing Pears for export, and with a view to decide on the best method of packing to recommend to members, a sub-committee was formed to go thoroughly into the matter, and report to the next committee meeting.

Mr. J. Donaldson, Paradise, S.A., writes as follows, on November 11:—We only grow Apricots and Peaches, with a few Oranges and Lemons.

The prospect for Apricots, half crop; Peaches are also light, half crop.

Reports from the

Clare and Angaston

show that all fruit will be a light crop—Pears especially —due principally to the dry conditions of last summer and beginning of winter.

Mr. C. W. Giles, of Grove Hill, South Australia, writes as follows (4/11/30):—Apples, Pears and Plums are showing a light crop. Cherries are fair to good. The crop of fruit taken all round is very light compared with last year.

The last day or two we have had very rough weather. I think it will effect the Cherries as the wind was very strong at times.

APPLE EXPORT CASES.

Trial Shipment of "Canadian" Standard Cases Made from Dressed Australian Hardwood.

A report has reached the Acting Minister of Markets (Hon. F. M. Forde) on a trial shipment of Victorian Apples sent to England in the Canadian type of case, made from seasoned and dressed hardwood. The consignment was experimental, to discover the suitability of the hardwood container for transport over long distances. The High Commissioner's officials found the cases on arrival to be in excellent condition and equal to all requirements. The fruit and the cases were more attractive than earlier shipments packed in softwood cases under the same label. Also the hardwood cases stood better up to rough usage.

According to the report, the Canadian type of case is finding increasing favor with buyers. It would be to the packers' interest to adopt hardwood for future shipments. Seasoned and dressed hardwood cases of the Canadian type can be manufactured in Victoria at a rate, allowing for drawback, below that for imported softwood, Mr. Forde is advised. A reduction, indeed, might be effected in contracts for large quantities.

Without friends no one would choose to live, even if he had all other goods.—Aristotle.

THE MORNINGTON PENINSULA (VICTORIA).

Somerville and Moorooduc.

IN THE SOMERVILLE DISTRICT a very fair crop of fruit is showing. In some orchards the crops are heavy, others medium, while here and there are orchards where the crop is very light.

Reviewing the district as a whole, however, it is safe to say that according to the present appearances, a substantial crop should be harvested.

A recent visit to the district showed that the growers were in good heart and keenly alive to effect any possible improvements with regard to cultural practices, also local, interstate and overseas marketing.

Mr. Thos. G. Tyler has an excellent crop on his 50-acre orchard. He speaks quite positively of the value of varieties for interpollination. The principal variety grown is the Jonathan, the pollinating varieties being Granny Smith, Duke of Clarence, Delicious and Dunn's.

He is carrying out a series of manurial tests, using a combination of super, blood and bone, and muriate of potash. In another section tests are being made with nitrophoska.

In pruning, Mr. Tyler recommends that sufficient branches and laterals be left to carry the leaves through which the tree breathes, tests in other parts of the world having demonstrated that at least 30 leaves were necessary for every Apple. The woolly aphis parasite—Aphelinus mali—was working well.

Mr. H. Barber has a nice orchard. Jonathan is the principal variety grown, others being Democrats, Sunnyside, Sturmer, Statesman, etc.

Mr. Barber remarked on the value of thinning the fruit in seasons of heavy crop, thus securing better size fruit with less strain on the tree. He is an appreciative reader of the "Fruit World" and considers that no grower should be without this paper.

Mr. G. A. Monk has a well-kept 10-acre orchard with the Jonathan Apple predominating, the other varieties being Reinette, Five Crown, Delicious and Granny Smith. The young Delicious trees which are coming on look well. Some Gravenstein trees on Majetin stock were noted. The owner pointed out that these were free from crinkle.

Mr. Allan Mentiplay has an excellent crop of Apples and Pears. The principal Apple variety is the Jonathan, with a sprinkling of other varieties, including Delicious and Democrat. The Rome Beauty Apple is not a satisfactory variety here. Over 800 fowls and ducks are kept for egg production. Mr. Mentiplay finds that he has no need to purchase artificial manure. Cows are also kept, some paddocks being laid down in clover. The whole property comprises some 33 acres and is in good condition.

On Mr. G. A. Grant's 35-acre property Apples are largely grown. He also has a fair area of Apricots, though Apricot production has not been profitable of late.

Nearby, Mr. H. Grant has a 16-acre orchard, in which Apples are largely grown, particularly the Jonathan variety. He also has a nice crop of Pears coming on.

A very fair crop of Apples was showing on the 40-acre orchard of Mr. J. Shelton. Here again, as elsewhere in the district, the main Apple variety was the Jonathan. Mr. Shelton is substantially interested in the poultry industry, and has 1,200 fowls. He has now no need to purchase artificial manure, the fowl manure being rich in nitrogen and potash.

Mr. G. R. Philbrick has a well-kept orchard, comprising some 30 acres, the principal Apple variety being the Jonathan. Mr. Philbrick also has a nice dairy herd.

A medium crop of Apples was showing on Mr. W. Firth's 10-acre orchard. Here the Jonathan predominates. Mr. Firth was busy spraying on the occasion of our visit. The crop is showing up cleanly.

The value of windbreaks was clearly demonstrated on Mr. R. Heywood's property. Mr. Heywood consistently gets good crops, and he attributes much of the success to the shelter afforded by the windbreaks of Pinus insignis. Five thousand cases of Apples were picked last year from this 11-acre orchard, of which three acres are young trees. The principal variety is Jonathan, interplanted with Duke of Clarence.

The young trees coming on include the varieties Delicious, Democrat, and Alfriston. Mr. Heywood applies No. 1 complete manure to the rate of 3 lbs. per tree. This year a satisfactory crop is showing up again.

The next property is that of Mr. K. H. Webb. He also has a big crop, and pays particular attention to cross-fertilisation. The Jonathan is the main Apple grown. He finds the Rokewood a good variety for cross-fertilisation, also Duke of Clarence, Yates and Dunn's. The orchard comprises some 17 acres.

Some fine old Rymer trees were noted at Mr. S. W. West's 20-acre orchard. One Rymer tree last season yielded 23 bushels. However, the principal Apple variety grown is the Jonathan. Others include Democrat, Five Crown and Reinette. Mr. West is a flower-lover, as evidenced by the charming garden surrounding his home. A considerable number of fowls are also kept. Mr. West holds decided views on matters of national interest and is convinced that the high tariff and the Arbitration Court are serious factors in adversely affecting primary industries.

One could not be long in company with Mr. Robert Campbell without noticing his pleasant Scotch accent. Mr. Campbell has been about four years in the district. He grows Apples and Pears, the principal Apple being the Jonathan; Pears—Packham, Winter Cole, etc. The orchard comprises some 15 acres, a portion of which is young. Mr. Campbell is convinced of the necessity for cross-fertilisation to secure best crops.

Mr. J. Scott is a familiar figure in the Somerville district. Besides his own orchard property, Mr. Scott is interested in other district orchards. His son, Mr. Syd. Scott, has a 34-acre orchard of Apples and Pears, the latter including D'Anjou, Williams, Broom Park, etc. A portion of the orchard is as yet quite young.

Nearby, Mr. R. Unthank has a well-kept orchard, the principal Apple variety again being the Jonathan. A Pinus insignis breakwind has been planted, and is now getting up nicely. We noticed Mr. Unthank was growing vegetables in quantity, particularly Cabbages, Potatoes, and the like.

Mr. J. A. Nairn's orchard was also noted to be in good condition. Mr. Nairn has been a member of the Victorian Fruit Marketing Association since its inception, and takes a keen interest in all its doings.

Mr. J. H. Jones has nine acres under orchard, the fruit being largely handled by the Peninsula Co-operative Packing Company.

Mr. W. Monk, who has a 17-acre orchard, speaks of the value of winter ploughing. Jonathans and Granny Smiths are the principal Apples grown. Twelve acres are in bearing, the other five being young.

On Mr. A. E. Butler's orchard the Jonathan trees inspected showed a very good crop, although in another part of the orchard the crop will be light this season. Granny Smith is another variety which is showing a particularly heavy crop. Mr. Butler pointed out that the

Apples which were near cross-fertilising varieties set well, whereas those lacking this feature did not set so well. A good crop of Apricots is showing.

Mr. H. H. Hawken is a well-known district grower and a delegate to many of the conferences. Mr. Hawken has been a reader of the "Fruit World" for over 25 years, and is probably one of the oldest subscribers to this paper. Mr. Hawken has also been a member of the Victorian Fruit Marketing Association since its inception.

Opposite is the orchard of Mrs. Clark, where the Apple crop was noted to be good. The young Apple orchard is coming on nicely.

Messrs. J. & B. Caldwell have a 70-acre orchard, the principal Apple variety being Jonathan. They also have a fruit tree and shrub nursery. In the latter were noted deciduous and citrus trees, also Privet and other shrubs. In planting an orchard Mr. Caldwell recommends that the trees should be placed 25 ft. apart. Adopting this practice, they have interplanted with Burbank Japanese Plums, the soil being of sandy loam. By cutting back the Plum trees hard the trees have been forced to bear very large fruit. These Plums are described as being like Oranges. They sell more readily than Plums of the same variety, which are smaller in size. Good returns are thus obtained in three or four years from time of planting before the Apple trees come into bearing. Subsequently, these inter-planted trees would be cut out. From a young Valencia Late Orange tree, seven years old, 1½ cases of choice Oranges were picked this season. Mr. Caldwell said there was no reason why Oranges should not be grown more freely in the district.

In adidtion to his 30-acre orchard, much of which is young, Mr. W. Armstrong has his first-rate dairy herd. Mr. Armstrong hails from the North of Ireland. He was busy milking during the time of our visit. Great credit is due to Mr. Armstrong for the success which has attended his unremitting toil. For his cows Mr. Armstrong has laid down in pastures and clover and also grows millet and maize.

Mr. H. J. Bissett has a 30-acre orchard of Apples and Pears, the latter including Beurre Bosc, Glou Morceau, and others. Mr. Bissett believes in early ploughing, thus keeping down the capeweed and thus compelling the bees to work on the blossoms of the trees with good results with regards pollination. On this orchard we noted a particularly charming view across the Western Port Bay.

Mr. T. W. White grows Apples, Pears, Plums, etc., also vegetables. He has a nice crop of fruit this season. His Plums include Grand Duke, President, etc. Factories have advised that owing to the uncertainty of the sugar position they were not buying Plums this season. The question of exporting Plums has arisen very definitely.

There is a light to medium crop on Mr. H. W. Shepherd's orchard property this season. Principal Apple varieties are Granny Smith and Jonathan; the Pears being Clairgeau and Beurre Bosc.

Mr. G. E. Shepherd has a fair crop of Jonathan Apples. Williams Pears are on the light side.

A good crop of fruit is reported from the orchard of Mr. Docura. On this 40-acre orchard the principal Apple varieties are Jonathan, Five Crown, etc.

Some very old trees were noted on the orchard of Mr. A. S. Unthank. Some of the Apple trees must be at least 70 years old. There is a young orchard as well. A fine old oak tree was seen, which was over 80 years old. The crop is on the light side this season.

Mr. J. E. Sage, who has a nice orchard property, takes a keen interest in all district affairs. Apart from his orchard, he has a butcher's shop.

We met Mr. A. J. Shout at the Peninsula Co-operative Packing Company. Mr. Shout's orchard is coming on nicely.

Mr. E. Murray was busy amongst his potatoes at the time of our call. He reports that the Apple crop this year is light.

Nearby Mr. M. Kennedy was busy ploughing. He was interested to hear of the success of the Victorian Fruit Marketing Association, and, in keeping with the other growers, readily joined the Association.

On Mr. W. Murray's orchard the principal Apples are the Jonathan, Rome Beauty, Statesman and Sturmer. There were also a few Pears.

Mr. W. A. Shepherd has a 40-acre orchard of Apples, Pears, Plums and Apricots. Nursery stock and vegetables are also produced. The soil is a light loam and the orchard is protected by a windbreak. Of the 10 acres of Pears, the principal varieties are Winter Cole and Winter Nelis. Reinette Apples have been cut down, and Granny Smith grafted thereon.

On Mr. F. Gill's 28-acre orchard, Apples predominate, the varieties being principally Jonathan, Democrat, and Delicious. Recently 300 odd varieties were cut down and Granny Smith grafted. A few Plums and Apricots are also growing. Before coming to Somerville Mr. Gill was growing fruit in Tasmania.

On his 80-acre orchard (mostly Apples), Mr. Jos. Unthank has a nice crop this season. Principal varieties are Jonathan and Sturmers. The Pears include Packhams, also Winter Nelis, Josephine, and Clairgeau. Mr. Unthank has taken a practical interest in the affairs of the district. He advocates that there be uniform packing charges on the several packing sheds on the Peninsula. This would save any competition for labour during the packing season. He believes that the export trade would be improved by pre-cooling of the Apples at district cool stores and sending the fruit in insulated trucks to the ship's side. When loading at Melbourne the holds should be completely filled at that port instead of it being opened up again for taking in fruit at, say, Hobart or Adelaide. He would like to see the packing system altered to include counts on the cases, not sizes. The buyer would thus know the exact number of fruits in each case, instead of having to calculate sizes.

Messrs. Toebelman Bros., at Moorooduc have a well-kept orchard of 27 acres, mainly Apples; there also being a few Pears and Plums. The principal Apple varieties are Jonathan, Five Crown, Stewarts, Granny Smith, etc. Mr. Toebelman also has a fruit tree nursery and a nice young orchard coming on.

The Two Bays Nurseries and Orchard Co. at Moorooduc is unquestionably the biggest enterprise in the district. In addition to the 550 acres of orchard, the company looks after an additional 150 acres, thus having the care of some 700 acres. In addition, 100 acres is devoted to a nursery for producing young fruit trees of all kinds.

At the Moorooduc property the nursery is principally for deciduous trees, their citrus trees being produced at Rydalmere, in New South Wales.

There is a very satisfactory crop of fruit showing on their Moorooduc orchard. Mr. C. M. Griffeth, who is in charge of the company's affairs, fully appreciates the importance of cross-pollination, and the orchards have been laid out accordingly, every fifth row being a pollinising variety. With the Jonathan some fertilising varieties are Delicious, Democrat, Dunn's.

If laying out a young orchard afresh, Mr. Griffeth states he would plant every third tree in every third row with a fertilising variety.

Last season 17,000 cases of fruit were harvested. In five years' time it is anticipated the crop should be around 100,000 cases. The principal varieties are Jonathan, Delicious, Democrat, Granny Smith, etc. Pears—Beurre Bosc, Glou Morceau, Williams, and Josephine. Among the young orchard coming on we noticed a large area devoted to Pears, particularly such export varieties as Packhams, Josephine, Winter Nelis, and Broom Park.

Three tractors are kept constantly at work. The orchards are ploughed, then harrowed; later they are disced, followed by spring-toothed cultivation.

Mr. Griffeth believes in early spraying, particularly the calyx spray with arsenate of lead for the codlin moth, which also has the effect of keeping down the looper caterpillar and other leaf-eating insects.

The woolly aphis parasite—Aphelinus mali—has been quite effective in getting rid of the woolly aphis.

Throughout the whole area trees of Pinus insignis have been planted as breakwinds. Last year some 20,000 pines were thus planted.

The whole property is well laid out, having a big packing shed for preparing the fruit trees for despatch.

There is also the blacksmith's shop, motor repair department, and well-appointed stables. Everything is done for efficiency and economy.

The company has its own cool store with a capacity of 15,000 cases. This has electric power supplied by the State Electricity Commission. The chambers are designed to carry nine tiers of cases.

There is a railway siding right on the property for the loading of goods. The trucks can shunt right into the cool store, which is so designed that the floor of the truck corresponds with the despatch platform. Thus fruit can be loaded quickly and with a minimum of handling.

The cool store is one the direct expansion system, and there is ample space for packing operations, a "Lightning" grader being installed. The fruit is handled by roller conveyors. White softwood cases are used exclusively for the export and interstate trade.

A new development is taking place in the installation of a stationary spray plant. Two concrete vats are being constructed, each to contain 1,000 gallons, and a piping system is being designed to spray the orchard from a central power plant, electrically driven. The property is served with electricity from the State Electricity Commission. The first installation is for spraying 80 acres. The piping and power systems are so designed as to be capable of big extension.

It will thus be noted that the Two Bays Nurseries and Orchard Co. is an extensive and well-conducted enterprise.

An early opportunity is looked for to continue the visiting of the orchards on the Mornington Peninsula.

Damage by Hail.—We regret to report that since the foregoing was written, the coming crops were materially damaged by hail.

CODLIN MOTH CONTROL.

Experiments in South Australia.

EXPERIMENTAL TESTS of codlin moth control were carried out at the Blackwood (S.A.) Experimental Orchard in the season 1929-30 under the guidance of the manager, Mr. Rodney Fowler.

The results of the experiments giving information are published in pamphlet form (Bulletin 243) by the Department of Agriculture for S. Australia.

After giving close details, Mr. Fowler gives a summary of the year's results thus:—

1. That this season arsenate of lead with the addition of fluxit in last three sprays gave very satisfactory results.

2. That arsenate of lead alone was only slightly less satisfactory than arsenate of lead and fluxit.

3. That arsenate of lead, two calyx sprays and/or calyx and first cover, followed by three oil sprys, using either Volck or Alboleum, gave good results and reduced the arsenical residue trouble.

4. That the best results from the standpoint of codlin control were obtained by the use of the lead arsenate and oil combination, but that the present costs of these spraying oils seem to be almost prohibitive.

5. That the lead arsenate and oil combinations when mixed before spraying left the highest per cent. of arsenical residue per pound of fruit, and that it was found most difficult to remove.

6. That the lead arsenate and oil combinations probably owe their extra efficiency to the fact that they make a heavy coverage on the fruit, which is not readily washed off by rain or rubbed off by wind action.

7. That a slight injury to the fruit follows the use of Volck and/or Alboleum, but that the damage is not serious.

8. That Volck oil alone will control codlin moth, but that it seems to inhibit to some extent the color formation of the skins of red Apples and causes a certain amount of rustiness, thereby detracting considerably from the general appearance of the fruit.

9. That from the viewpoint of effectiveness in codlin control Alboleum may be expected to give just as satisfactory results as Volck.

10. That "Arsinette" alone gave very good results, but a suspicious amount of what may be arsenical residue was noticeable on the fruit at packing time.

11. That in a dry season like the one just experienced, applications of oil tend to collect the dust on foliage and fruit to the detriment of both.

12. That arsenical dusts do not seem to give satisfactory results in codlin control.

13. That it is not advisable to omit the calyx spray.

14. That, on the whole, in the Apple-growing areas in South Australia there was a heavy crop of fruit with a naturally light infestation of codlin moth during the season under review.

VICTORIAN FRUIT MARKETING ASSOCIATION.

It is pleasing to report that there has been a substantial increase in the membership of the Victorian Marketing Association—the Growers' Vice-President (Mr. C. M. Griffeth) and the Secretary (Mr. R. E. Boardman) spent several days in early November in calling on growers around Somerville. Those who were already members spoke appreciatively of the good work accomplished, and the other growers who were called upon joined up quite readily.

It is suggested that it would be of advantage to have, say, district quarterly meetings, when practical cultural matters could be discussed and the work of the V.F.M.A. could be reviewed.

Mother: Did you call Edith up this morning?
Daughter: Yes, but she was not down.
Mother: Why didn't you call her down?
Daughter: Because she was not up.
Mother: Then call her up now, and dress her down for not being down when you called her up.

Fruit Tree Stocks.

An Interesting Survey.

The Urgent Necessity for Scientific Research Work.

A Paper by Geo. A. Green (Auckland) before the recent N.Z. Horticultural Trades Association.

THE DAY HAS PASSED when there can be any argument as to the necessity for serious investigations as to the best root stocks to use for different classes of commercial fruit trees grown.

In New Zealand a few of the private nurseries, private growers, and a few enthusiasts have done a good deal already in practical demonstration as to the action and behavior of some of the commercial varieties of fruits when worked on certain stocks, but there are practically no reliable records of systematised research work, and of sustained tests upon which the nurserymen and orchardists can built for the future.

There has been much research work done in other countries, but before these can be adopted by New Zealand growers, they require verification under strict observations under local conditions.

Another point is, that, not only will the same variety act differently on different stocks, but the same variety will often vary on the same stock in different soils and under different climatic conditions. **Enough is also known to show that there is a vast field for successful economic research in connection with double working.** This has already been noted in the case of Delicious, Cox's, Sturmer, and other Apples worked on the "Spy" roots with other varieties used between them.

For instance, some **Plums** which are unsatisfactory, worked direct on the Peach, are more satisfactory with a section of Plum between in other cases. Particular varieties which do not succeed direct on the Peach produce remarkably from fruits when Peach is worked on the plum and the plum on to the Peach.

In Apples in New Zealand, we have at least six stocks in use, all of which are known to have some good qualities, but it is too risky for the growers to adopt any one of them till experiments have proved which is the best available.

In Peaches, the old Maori seedlings gave good results for several generations; supplies of stones of these are no longer available. These were followed by Californian Cannery Pits; these brought in the root knot disease, and it was at no small expense that the New Zealand nurseries eliminated it completely from the nursery stone fruits. For many years past North Carolina Peach pits have been used largely, but the time has come when there should be a strict selection made of this type and we should grow our own supply in New Zealand. This is a question for a research station.

Various Plums have been used for the Peach and the Nectarine, and to date the most suitable one seems to have been the Mariana, but this one will not suit all varieties nor on all soils. It is evident that some other stock must be available, while double working may be resorted to in some cases.

Plums.—We have to choose our stock to suit our soils and varieties.

Peaches suit well under certain conditions.

Myrobolan and Mariana Plums under other conditions are useful.

In the case of the two latter we are fortunate in having some very fine types which are grown asexually by the trade, but more are necessary. One little known stock, "Morrison's Seedling," has been tested for 50 years, and will grow well under a variety of circumstances, and produce large trees with a minimum of cultivation and manure.

Apricots.—The Apricot, Peach, Almond, Myrobolan, Morrison's and Mussel, Plum, Mariana, have all been used, and under certain circumstances have proved a success, but research is needed to settle just these conditions and circumstances.

Pears.—New Zealand wild French stocks were once used, and their variability are all too well known. During the last 25 years, however, Jap. seedlings grown from one or two New Zealand types and also asexually propagated have given great promise, but here further research is required.

AMERICAN FRUIT CROPS.

Interesting Details from California and Pacific Coast States.

Apples, Pears, Peaches, Prunes, Grapes and Figs.

October 1, 1930.

California.

Apples.—Reports of this date show no change in the total season's crop for the State. A gross production of 11,502,000 bushels is indicated by the reported 81 per cent. of full crop on October 1. In 1929 the total crop was 7,880,000 bushels, and in 1928, 13,105,000 bushels. Of the total amount now forecast, about 2,147,000 barrels are classed as commercial crop.

In Washington the commercial crop is now reported as 10,464,000 barrels, in Oregon 1,635,000 barrels.

In the entire United States 153,369,000 bushels, total crop are expected as compared with 142,078,000 bushels in 1929 and 186,893,000 bushels in 1928. In considering a forecast at this date it should be remembered that summer and early autumn varieties are already harvested. Late varieties are now in the process of harvest.

Peaches.—With Peach harvest completed there is little to report at this date except the confirmation that the largest California Peach crop of record has been produced. It is estimated that 482,000 tons of Clingstone Peaches have been produced and 211,000 tons of Freestones. This large crop coming to a market with insufficient demand required a decisive programme of marketing guided and provided by the entire Peach industry. More Peaches have been shipped fresh to out-of-State markets than in other years, about 13,000,000 cases of canned Peaches are believed to have been packed from the crop, while great quantities have been wasted, and probably about the usual tonnage has been dried.

The estimated Peach production for the entire United States is 49,255,000 bushels, of which California is by great adds the heavy producer with 28,877,000 bushels, Georgia is second with 4,698,000 bushels, New York is third with 2,158,000 bushels, and the estimate for New Jersey is 1,788,000 bushels.

Pears.—As Pear harvest nears the season's close, reporters show an 82 per cent. full crop, which still develops the forecast of 227,000 tons for the total crop. This crop may be compared with a production in 1929 of 190,000 tons and 224,500 tons in 1928. The season's out-of-State shipments to September 30 were 10,290 cars, as compared to 7,135 cars to the same date in 1929, and 8,879 cars in 1928.

The canned and dried tonnage is not yet recorded.

The October 1 forecast for all the United States is 24,969,000 bushels, of which 3,204,000 are from New York, 3,935,000 from Washington, 3,200,000 from Oregon while California's forecast of 227,000 tons is equivalent to 9,459,000 bushels.

Prunes.—As Prune harvest is completed, a large number of growers in all Prune producing areas of the State show a higher estimate of the crop produced than at any other report date of the year, which is 82 per cent. of a full crop. There are, however, some Prunes wasted or not processed, which, combined with smaller than normal sizes leaves this preliminary estimate at 234,000 tons. Whether or not the factor of small sizes has been correctly evaluated cannot be determined until the fruit reaches the commercial channels, where it can be recorded. Other recent California Prune crops show 1929 as 103,000 tons, 1928 as 220,300 tons, and 1927 as 225,000 tons.

Figs.—Fig reporters continue to show a State condition of 85. On October 1 in 1929 the crop condition was reported at 79 and the resultant crop was 1,500 tons of dried Figs and about 6,000 tons sold fresh or canned. For the previous year the condition was 61, with the ultimate production of 11,500 tons dried and 6,130 tons handled fresh. It now seems probable that there have been losses of dried Figs of merchantable quality, during the period of showers in late September and again at the time this report is being prepared. Interstate shipments to September 30, 1930, were 111 cars, as compared to 134 cars at the same date in 1929 and 97 cars in 1928.

Grapes.—The quantity outlook of the Grape crop now stands at 2,088,000 tons for all varieties. The forecast for Wine Grapes is 463,000 tons, based on a condition of 80. The **Table Grape** condition is 84, and the forecast is 432,000 tons.

A total of 1,193,000 tons of fresh **Raisin Grapes** is forecast on an October 1, reported condition of 82. With an indefinite market, fresh shipments still going forward and large quantities definitely left on the vines or diverted to Grape products plants, it is not possible to determine the probable tonnage of dried Raisins that will be made.

MANURING APPLE ORCHARDS.

American Experiments.

THE RESULTS of five years of fertilizer applications in three Hudson River Valley apple orchards are given in Bulletin No. 574, issued by the New York State Experiment Station, Geneva, N.Y., U.S.A. The authors are Messrs. H. B. Tukey and L. C. Anderson, and a summary is as follows:—

The orchards represent three periods in the life of an orchard, and are located on the three soil types representative of the major apple interests of the Valley, namely —(a) Young McIntosh orchard at Kinderhook on unfertile Hoosic sandy loam; (b) a young bearing McIntosh orchard at Upper Red Hook on relatively unfertile Dutchess slate loam, and (c) a mature bearing Yellow Newtown orchard at Viewmont on moderately fertile Dutchess silt loam.

Applications consisted of liberal amounts of nitrate of soda, superphosphate and muriate of potash, alone and in combination, according to the diagrams given for each orchard, applied in early spring just as the first green of the buds was showing.

The young orchard at Kinderhook was kept thoroughly tilled and was sown regularly to a cover crop. The bearing orchards at Upper Red Hook and at Viewmont were cultivated to the degree that practical orchardists often call "clean cultivated," but which would not satisfy the requirements of an experimental clean-cultivated orchard. The weed growth served as cover crop.

The results of the applications were as follows:—

1. No appreciable gain in growth from fertilizers was observed in the clean-cultivated young orchard at Kinderhook, although an increasing improvement in the cover crop was noted on each plat receiving nitrogen.

2. A slight increase in size of tree in the poorly cultivated young bearing orchard at Upper Red Hook, followed nitrogen applications, together with darker green foliage, a slightly greater set of fruit in the "on" year and a corresponding decrease in the "off" year, a small increase in total yield, no effect upon size or colour of fruit, and a questionable value to the orchardist.

3. An increase in size of tree in the poorly cultivated mature-bearing orchard at Vermont was obtained from nitrogen applications, accompanied by darker green foliage, greater terminal growth, very heavy set of fruit resulting in small size and poor colour, increased set in the "on" year and corresponding decline in the "off" year, and a financial loss to the orchardist.

No effects were noted from superphosphate or muriate of potash, either alone or in combination, in any of the orchards.

The outstanding effect of fertilizers has been the greatly increased set of fruit when nitrogen has been applied, and the subsequent effect of heavy cropping upon the trees and upon future crops.

The small increase in size of tree and improvement in the cover crop on nitrogen fertilized plats offers the potential possibility, however, for larger crops in future years.

The cleaner cultivated the orchard, the less response to nitrogen fertilizers; while the less cultivated the orchard, the greater the response.

The difference in results depending upon the age and the condition of the orchard indicates the inadvisability of making any blanket recommendations in regard to fertilizer applications.

Fertilizer applications by themselves are not shown to be the panacea of orchard ills in the Hudson River Valley that they have often been considered.

Fertilizers are shown to be one of a number of considerations in working out a system of orchard management.

The Pollination of Fruit Trees.

(By A. G. Strickland, M Agr. Sc., Science Field Officer, Department of Agriculture, Victoria.)

CROSS-POLLINATION has been recognised for many years as an important phase in orcharding. All experienced fruit-growers are aware that certain kinds and varieties of fruit will not yield satisfactorily unless inter-planted with other varieties, and whenever new plantings are being made the fullest consideration should be given to the selection of suitable varieties for such inter-planting. Modern fruit-growing tends to the planting of fewer varieties, and to the growing of one variety in a solid block. For the self-fruitful fruits (that is, fruits which will set fruit if pollinated with their own pollen or pollen from another tree of the same variety) this practice does not reduce the maximum yields of fruit, but for fruits which require cross-pollination (as do most of our varieties of Apples, Pears, and Plums), the practice of planting in solid blocks does result in reduced yields.

Pollination is the sexual process by which flowers produce seed, and as fruit, the grower's object, is usually accompanied by seed, it is a very important matter.

Broadly speaking, flowers are provided with male and female organs. The male organs are the stamens, and their function is to produce large numbers of tiny pollen grains. When these pollen grains are ripe, they are shed, and the stamens, having completed their function, die. In a flower which is perfect, or in other words has both male and female organs present, these stamens are grouped round the female organ or pistil. This female organ consists of a seed-case containing bodies which will later develop into seeds if pollinated, and a long stem projecting upwards and bearing a sticky bulb or stigma adapted to receive pollen grains from the stamens. All flowers do not have both seedcase and stamens present—for instance, the La Marguerite variety of Strawberry carries flowers which have no stamens, and in order to obtain a crop from this variety it must be inter-planted with another stamen-bearing variety which can produce pollen.

When a pollen grain falls, or by agency of insects comes in contact with the sticky stigma of the female organ, the act is known as pollination. The pollen grain, having reached the stigma, now sends out a fine tube, which passes down the stem of the female apparatus and fertilises the female germs in the seed-case, thus enabling them to ripen into fertile seeds. As soon as this occurs, swelling of the parts commences, and the blossom appears to have "set." If fertilisation does not occur after the lapse of a certain period, the whole of the flower simple drops off the tree, and no fruits form. When a flower is fertilised by its own pollen, it is said to be self-fertilised; when it is fertilised by pollen from flowers of another tree of different variety, it is said to be cross-fertilised or cross-pollinated.

Fruit varieties may be broadly divided into two classes, viz., self-unfruitful and self-fruitful.

Self-unfruitful varieties will produce no fruit when fertilised by their own pollen or that of another tree of the same variety. Nearly all varieties of Cherries are self-unfruitful, and it may also be said that all varieties of Apples, Pears, and Plums, even though not absolutely self-unfruitful, are benefited by having other varieties planted with them as pollenisers. Many of them are partially self-unfruitful, which means that under certain conditions a limited number of fruits will be set without cross-pollination, but for maximum yields inter-pollinators are necessary.

Self-fruitful varieties are able to produce mature fruit when pollinated by pollen of the same variety, or even without pollination at all. Citrus fruits may be quoted as an instance, also French and Sugar Plums.

The Williams Bon Chretien (or Bartlett) Pear is generally regarded as self-fruitful. Nevertheless, it will set more uniform crops over a period of years if interplanted with another variety. In 1911, Mr. Pescott, of this Department, covered a Williams Pear tree with insect-proof netting in order to test the tree's powers of self-fertilisation. There were 558 flowers on this tree, and not a single fruit was set, demonstrating that under certain conditions the Williams Pear may be absolutely self-unfruitful.

At the same time, four Apple trees, two Jonathans and two London Pippins, were similarly enclosed. Though they all blossomed together profusely, only one fruit, a Jonathan, was set on the whole four trees. Adjoining unenclosed trees set heavy crops, thus indicating self-unfruitfulness of Jonathan and London Pippin. This experiment also stresses the importance of insects, particularly bees, for cross-fertilisation.

Proper fertilisation is dependent on, firstly, the **presence of suitable varieties** for inter-pollination, if the main variety is self-unfruitful.

Secondly, on the presence of insects, such as bees, to enable the distribution of pollen from flower to flower. It may be said in passing that wind is quite unimportant in distributing pollen from tree to tree. It has been stated by some authorities that 99 per cent. of all fertilised blooms owe their pollination to bees or other insects, and the remaining 1 per cent. to wind.

The question may be asked—"What are the essentials of a good polleniser?" They are briefly as follow:—

1. The two varieties must bloom at the same time—an obvious necessity. The mistake is sometimes made of planting Rome Beauty and London Pippin with such a variety as Jonathan, which finishes blooming before the blossoms of the two former are even open.
2. The varieties must have an affinity for one another, i.e., the pollen of one must be acceptable to the pistils of the other. This affinity between varieties can only be determined by careful crossing experiments. At present, we have only American experience to follow, but it is hoped to commence such crossing experiments in this State during the coming season.
3. Both varieties must produce large quantities of pollen.
4. Varieties should come into bearing at about the same age.
5. Varieties should be good commercial ones.

Planting for Cross-pollination.

THE BLOSSOMING PERIODS of two varieties should overlap at least one week, as seasonal variations may cause slight fluctuations in the recorded blooming dates. Nevertheless the relative differences in blossoming periods of different varieties remain more or less constant. That is to say, if one variety is late or early in blooming in a particular season, other varieties will be late or early to a similar degree. In Bulletin No. 58 of the Department of Agriculture, the blossoming dates of various fruits in various districts are tabulated in detail, and from a study of these tables it is an easy matter to obtain varieties which bloom simultaneously.

There is a pitfall for the unwary, however; it does not always follow because two varieties of fruit blossom at the same time, or slightly overlap, that they are suitable for cross-pollination. They must also have an affinity for one another. It is known that some varieties of fruit trees are of no use for pollinating certain other varieties, the trouble being that the pollen of one will not fertilise the flower of the other. The task of determining between what varieties this inter-sterility exists is a long and arduous one, and at the present time is not far advanced. As facts come to hand on this phase of the problem they will be made known to growers.

Plums.

In America, a certain amount of information on inter-sterility has been accumulated. For example, it has been demonstrated that the Japanese types of Plum do not pollinate with the European type. Most European varieties, however, will cross-pollinate one another effectively. Self-unfruitful Plums which require inter-pollinators are Wickson, Grand Duke, Imperial, Robe de Sergeant, and many others. A list will be found in Bulletin 58. Climax, French, and other sugar varieties are self-fruitful, and do not require inter-planting with other varieties to secure satisfactory yields.

Pears.

Experiment has shown that pollen production by various Pear varieties is always abundant. Williams Pears will give better results if inter-planted with another variety blooming at the same period. Commercial varieties which may be recommended for planting as pollenisers for Williams are Beurre Bosc, Beurre d'Anjou, Winter Nelis—the last-named being the most suitable. Keiffer Pears are partially self-unfruitful, and should be inter-planted with Beurre Clairgeau or Howell. Most varieties will set better crops if inter-planted with other varieties.

Apples.

Under certain conditions, Jonathan will often produce heavy crops without the aid of a pollinator. However, it is always best to interplant in order to meet the possible contingency of self-unfruitfulness. On rich well-drained soil, Yates may be used as an inter-pollinator; on less fertile soil, use Delicious or Sturmer. Experience in the United Kingdom and United States shows that inter-sterility between different varieties of Apples is by no means as common as in some other fruits, but certain varieties seem to be more efficient pollenisers than others. For example, Rokewood is reputed to be a very good polleniser for Jonathan. Most varieties of Apples are partially self-unfruitful, and will yield better crops if inter-planted with other varieties blooming at the same time.

Stone Fruits.

Stone fruits seem to set more regular crops without cross-pollination than do Apples, Pears, and Plums. Most varieties of Peaches are self-fruitful, and do not require inter-planting with other varieties. In the United States of America, however, the variety of Peach J. H. Hale, has been shown to be completely self-unfruitful, and several of our own varieties of Peach may possibly be partially self-unfruitful, and, therefore, would be benefited by interplanting. Sour Cherries are self-fruitful. On the other hand, experiment all over the world has shown sweet Cherry varieties to be self-unfruitful. In the main, none of the sweet Cherry varieties could be expected to set more than a few fruits unless there is provision for cross-pollination.

The Provision of Pollinators.

Having touched briefly on the theoretical side of inter-pollination I will now deal with some practical considerations. First of all, there is the question of providing pollinators. Since the highest yields are obtained from trees adjoining a good pollinator, and since a decrease in yield occurs in rows two trees distant, it is advisable to follow a system whereby no tree is more than two trees distant from the desired pollinator. Two solid rows and then either one or two rows of the pollinating variety, should prove most satisfactory. If mixed planting is not objectionable, then

every third tree in every third row

would provide a nearby pollinator.

Where there is insufficient provision for inter-pollination in an already established orchard, pollinators may be grafted on limbs of trees at suitable intervals throughout the orchard. Every third tree in every third row should be topworked. Grafts should be inserted fairly high upon the limbs of old trees, as if inserted too low a large cut surface is exposed which may not heal satisfactorily. For a few years it is a good plan to pull fruit from the pollinator after setting, thus helping the development of a good limb and ensuring a plentiful supply of blossom very year.

Until the grafts have grown, small limbs of suitable pollinating trees, carrying plenty of blossom buds, may be distributed throughout the orchard, these limbs being held in large bottles or tins of water.

Bees as Pollinators.

I have stated previously that the common honey bee is the best pollenising agent in the orchard. Under certain unfavorable weather conditions there may not be a sufficient number of bees in the orchard to ensure a full crop of fruit. Where such is the case, it is worth the grower's while making arrangements for the distribution of colonies of bees throughout his orchard. It is generally considered that one colony to each acre of mature trees is advisable under such conditions. The addition of bees alone, however, will not turn an unprofitable orchard of one self-unfruitful variety into a profitable concern. Flowers of a pollinating variety must be also provided by means of dispersing blossoming branches of such variety through the orchard, and eventually by grafting inter-pollinators.

When fruit trees bloom profusely and yet fail to set full crops of fruit, the grower should immediately suspect lack of proper pollination, although this may not always be the cause of faulty setting. Factors other than lack of pollination which may cause failure are frosts injuring blooms, insects, such as thrips, killing blooms, improper manuring, etc. In a large percentage of cases, however, insufficient provision for pollination will be the cause. Ideal fruits from the standpoint of production are those which require no pollination whatever. The Navel Orange and Zante Currant Grape are of this type.

It may be said in conclusion that, with the possible exception of sour Cherries, Quinces, some of the European Plums, and a few Peach varieties, provision must be made for proper cross-pollination when planting the orchard. Lack of attention to this matter will inevitably result in lower yields of fruit.—"Journal of Agriculture," Victoria.

Victoria.

HARCOURT.

District Estimate, 185,000 Bushels Apples.

OUR travelling representative, Mr. J. M. Davidson, sends the following notes regarding the Harcourt district:—

Ford Bros., North Harcourt, have about 70 acres under Apples and Pears; main varieties:—Apples: Dunn's, Jonathans and Rome Beauties. Pears: W. Nelis, Josephine, Williams. About a third of a normal crop of Pears is expected. Apples are unfortunately a practical failure. The Apples bloomed very well, but very few set, and Mr. Ford, although rather at a loss to account for the bad setting, thinks that the thrip and the unsettled weather conditions were responsible.

K. Frankling: 29 acres (20 acres young trees), Apples, Pears, Apricots, mixed varieties. Very light crop last year, but does not expect to have any more this season, much damage having been caused by thrips.

G. Douglas: 32 acres, mainly Dunn's, Romes, Jonathans, Cleos., Stone Pippins. Is grubbing out old varieties and replanting. Mr. Douglas exports the bulk of his fruit. Some trees are 60 years old and still bear well. Mr. Douglas thinks he will have a 50 per cent. crop of Apples and expects a good crop of Pears, mainly W. Nelis and Josephine.

F. Barnes: 15 acres, mainly Dunn's, Five Crowns, Romes and Jonathans. Pears—Nelis and Josephines. Prospects: Dunn's, very light; Jonathan, 50 per cent.; Five Crowns and Romes, good. Pears—Nelis, Josephines, 75 per cent.

H. McLean: 17 acres of Apples and Pears. Apples: Dunn's, Cleos., Jonathans, Delicious, Stewart, Granny Smith, Schroeders, Five Crowns, Rome Beauties. Pears: W. Nelis, Josephines, B. Bosc, Coles. Prospects: A good crop is showing, particularly Dunn's.

His estimate for the district crop is about 185,000 cases, or 45 per cent. of normal. The marketing is mainly export.

A. E. Symes: 13 acres, mainly Dunn's, Jonathans, Romes; has planted young Delicious. Pears: W. Nelis, Josephines, Williams, Bosc. Prospects:—Apples: Dunn's very light, Jonathans and Romes 50 per cent. Pears: Nelis and Josephines 50 per cent. The fruit from this orchard is mostly exported.

W. Eagle, Jnr.: 22 acres (10 acres 32 years old, remainder 8 to 20 years). Varieties of Apples: Romes, Jonathans, Dunn's, Rymers, Five Crown. Pears: W. Nelis and Josephines.

An interesting feature in this orchard is the wood fires system which Mr. Eagle has laid out between the rows, as a precaution against frost. Mr. Eagle claims that he saved portion of his crop last year by lighting these piles of wood on the nights of the heavy frosts. Spraying for thrips was attempted, using nicotine and sulphur, but without success; the leaves were scorched. The orchard is kept in good heart by applying artificial manure.

C. A. Bertuch: 25 acres (15 acres 40 years old, 10 acres 8 to 14 years). Varieties:—Apples: Dunn's, Jonathan, Delicious, Romes. Pears: W. Nelis, Bosc, Josephine, Williams. Cherries: Early Purple Guigne and Margaret. Good crop. The fruit is disposed of in local, interstate and overseas markets. Apples light, Dunn's in particular having a patchy setting.

W. Symes: 28 acres—19 acres Apples, 5 acres Pears, 4 acres Plums. Varieties:—Apples: Dunn's, Romes, Cleos., Jonathans, Five Crowns. Pears: Winter Nelis and Josephines. A good crop was harvested last season, but a light crop seems inevitable this season.

J. Milford: 21 acres (trees 20 years of age). Varieties of Apples: Dunn's, Romes, Stone Pippins, Jonathans. Pears: Nelis, Josephine, Bosc, Packhams, Williams. Light crop of Apples and Pears expected.

A. Grant: 17 acres, mainly Dunn's and Jonathans. One acre of stone fruit. Was cut out by frost last year, and expects half normal crop in coming season.

A. Milford: 29 acres, some trees 30 years old. Has approximately three acres of Pears—Nelis, Josephines and Williams; remainder Apples. Varieties of Apples: Dunn's, Jonathans, Romes, Yapeens, Stewarts, Democrats, Delicious, Cleos. This year the crop is very light.

T. Milford: 22 acres, mostly Apples; some trees 30 years old. Varieties:—Apples: Dunn's, Schroeders, Five Crowns, Romes. Pears: Williams, Josephines, Nelis, Winter Coles. Also grows a few Plums, mixed sorts.

W. Ely: 28 acres, mainly Dunn's and Cleos. Pears: Josephines (good crop) and Nelis (light crop). Had very few thrips in garden.

W. A. Carr: 16 acres. Varieties of Apples: Dunn's, Cleos., Granny Smiths, Romes, Jonathans, Stewarts, Stone Pippins, King David. Pears: Josephines, Nelis, Williams. 50 per cent. crop is expected. This grower goes in for the export market mainly.

When visited, Mr. J. H. Lang was busy packing Apples for the Brisbane Market. He kindly prepared a sketch showing the layout of the district orchards.

Mr. E. Pritchard showed the "Fruit World" representative every courtesy and facilitated his programme for calling on the growers.

GEELONG AND DISTRICT.

Mr. E. Weitnauer, Batesford, writes as follows on November 13:—

I always think Geelong should be divided into three districts, namely—(1) Inverleigh, (2) Batesford and Bannockburn, and (3) Bellarine Peninsula. These districts are so widely spread that one general statement does not correspond with each district, so I think I should deal with each district separately.

Inverleigh is principally an Apricot district with quite a good crop, slightly better than last year, while Apples are also grown, and promise to be very light. Jonathan, Dunn's, Cleopatra, Romes, and Delicious are the principal varieties.

Jonathans are fair, and Romes promise the next best.

Pears are also grown. Vicar of Winkfield, Williams, and Packham's Triumph are medium.

Bellarine Peninsula.—The orchards are looking well. This district possesses most of the young orchards around Geelong, and produces some fine quality fruit, Apricots taking the lead; while Apples, Pears and Plums are about evenly distributed. The crops, except Apricots, are very light; but some report that late Plums are good.

All the best commercial sorts of Apples are grown (except Yates). The planting in this district has exceeded the rooting out the last few years. Thrips has been the cause of the light setting.

Bannockburn and Batesford.—This is the oldest orchard district of Geelong, and still has some fine orchards on the rich river flats. Though most are being replaced by young trees, there are still trees growing and bearing well that must have been planted 60 years or more.

The principal fruits are Apples, Pears, Plums, Apricots, Peaches, Quinces and Cherries.

Apples predominate, and almost every variety (except Yates) do well.

This season the Apples are very light, and the best crops will be picked from Jonathan, Romes, Gravenstein and Cleopatra; others, such as Delicious, Pome de Neige, Sturmer, Alexanders, Granny Smith, Stewart, Reinette, are also grown.

Pears are from medium to light. Williams, Packhams, Vicars and Howell are the principal ones.

Apricots are a full crop of a good quality; growers having thinned heavily. Moorpark is the principal variety.

Plums are light all round, the best being Diamond, Early Orleans, and President; others grown are Angelina, Jefferson, Diamond, Green Gage, Golden Drop, Grand Duke.

Peaches.—Most of the old trees have been pulled out, but new trees have been planted, and in a year or two should see a substantial increase; Hales, Briggs, Pumps, Wiggins, Elberta, Late and Early Crawford are the principal sorts.

Cherries, for which this district was once so much noted, have almost disappeared; the trees have gradually died, and very few are being planted.

Tomatoes Now Favored.

In Batesford a new fruit is now coming into favor—the growing of the Tomato; being of such a fine quality and flavor, growers have no difficulty in disposing of crops on the fresh fruit market at payable prices. Quite a large area is being planted and doing well this season. Wilt has made its appearance, but not so bad as last season.

Several Asparagus plots have been planted and doing well. One grower has cut his record crop this season off two acres.

In conclusion, it can be said that Geelong has a light to very light crop of fruit, except in Apricots. There are various reasons. The heavy crop of last year, the bad blooming days except for a few days, and the thrips are the causes.

SOMERVILLE AND DISTRICT REPORT.

Apples.—This season promises to be a light crop, probably about 50 per cent. Green Apples, such as Reinette, Alfriston, etc., being exceptionally light.

Jonathan, which is the most popular Apple, is very patchy, some growers having quite a good setting, while the majority have probably no more than two years ago.

It is very noticeable that early blooms set freely enough, but late blooms have not, although at first they gave the impression that they would set; since then they have shed rather badly.

At present the weather is very rough, and growers are a little uneasy in case hail should follow.

Pears.—W.B.C., although this variety bloomed well, it shed badly, thus reducing the crop to about half of a normal crop. Other varieties of Pears promise light yields.

Plums.—Some varieties very good, others medium to good. Generally speaking, good crop.

Apricots.—Good, in some cases excellent, crops of Moorpark. This variety is generally a shy bearer, but it appears at present to be going to turn out well.

W. P. Hutchinson.

Somerville, 13/11/30.

Later.—A hailstorm did considerable damage.

DONCASTER.

The principal fruits grown in the Doncaster district, include Pears, Peaches, Plums, Apricots, Apples and Cherries.

Stone fruits show a full crop: Apples and Pears only medium. During November there was considerable shedding.

During the past few years there has been a steady increase of the area under Peaches.

District developments include the formation of a Pear Export Company, to facilitate overseas shipments.

The West Doncaster Cool Store is installing motor power for the coming season.

—(John Tully).

IMPERIAL FRUIT SHOW.

Australian and New Zealand Prizes.

At the Imperial Fruit Show, Mr. E. F. Page, Curlwaa, N.S.W., received second prize for Grapefruit.

For dessert Apples, Miss V. Stephens, Stoke, N.Z., come first with H. Lake, Bridgetown, W.A., second.

For canned fruits, the N.S.W. Irrigation Commission secured three first prizes for Peaches and two for Apricots. The Victoria Cross Manufacturing Co., won first and second prize for canned Pineapples.

PRUNING FRUIT TREES AND VINES.

During July last the Block E (River Murray, near Renmark) branch of the South Australian Bureau of Agriculture, held its annual pruning competitions.

The tree pruning was held on Mr. L. A. White's block. Only three competitors entered this section. The trees selected had been pruned by the same competitors last year. The judges were Messrs. P. John and C. Pappin Smith, who remarked that the tree pruning showed a marked improvement on last year's, and faults mainly were no provision made for re-furnishing in the Peach, weakness of leaders in the Pear, and overcrowding of fruit spurs in some instances in the Apricot. The results in the trees were:—M. Pethick, first, 254 points; A. R. Nenke, second, 252 points; and H. B. Davis, 244 points.

The vine competition was held on Mr. T. J. Hendrick's property, and was much better contested. The following are some of the judges' remarks:—

Currants.—Strong spurs cut too short, weak spurs left too long, too many three-bud spurs, and spurs crowded.

Sultanas.—Number 1 cane (nearest to crown of vine) should go to bottom wire, and No. 2 to the top wire, this to keep fruit wood back to near the centre of vine; too many fractured cones; old wood not cleaned up; canes choked, bent too sharply on wire; water shoot and spurs underneath; too severe and too much saw; water shoot left in centre of vine; too many spurs and extended from frames; never leave spurs beyond canes.

Gordos.—Weak spurs too long, and spurs crowded; cut weak spurs back to one bud; too many spurs, and saw cuts too deep; three-bud spurs not wanted; saw cuts should be cleaned; too many base buds. The competitions were carried out under the new rules, which now include 10 points for time.

The results of the vine section were:—M. Pietsch, 308 points; M. Pethick, 305½ points; A. R. Nenke, 291½ points; T. Hendrick, 289½ points; B. Jones, 281¾ points; R. Falkner, 273½ points; H. Newstead, 263¼ points; H. B. Davies, 259 points; W. Giles, 255½ points. (Secretary, Mr. H. B. Davies, Renmark.)—"S.A. Journal of Agriculture."

Export of Pears from Australia.

"Long Bushel" Case Recommended; Grading, Packing and Marketing Suggestions.

"Plain" Grade Should Not be Shipped.

Address by Mr. F. J. Garford at Doncaster, Vic.

THE EXPORT OF PEARS from Australia formed the subject of an interesting address by Mr. F. J. Garford, of Mitcham, Vic., before a largely attended meeting of fruitgrowers at Doncaster recently.

Mr. W. A. Webb, who presided, stated that Mr. Garford had spent many years in the Covent Garden Market, London, before coming to Victoria to grow fruit. Mr. Garford had just returned from a visit to the United Kingdom, where he had closely observed the handling and marketing of Australian fruit—particularly Pears—in England.

Mr. Garford stated that more Pears were exported from Victoria last season than in any previous year. Although some consignments would show a fair return, the majority would not nett to the grower the bare cost of production. This state of affairs could not continue and unless steps were taken to remedy matters, both at this end and at the port of distribution, the Pear grower would be forced out of business.

In past years the boats had been blamed for a lot of damage, and in many instances it was quite justified. On the other hand, however, growers were at fault because of careless picking.

Two consignments of B. Bosc ex the "Orontes" were very specky: in the middle of each speck there was plainly visible a tiny puncture. This had been caused when picking, either by bringing the Pear in contact with a fruit bud, or else the end of a twig. Another line of wasty Bosc from the same boat clearly showed in every speck an indentation caused by finger-nails. In this instance, the man who was picking was probably careful not to injure the fruit against buds, etc., but was unconsciously doing an equal amount of damage with his finger-nails. The returns for these consignments would show a loss to the growers concerned, who would probably blame either the ship or selling agent, when it was undoubtedly their own fault that their fruit was in bad order.

Packing and Grading.—This showed a very big improvement on past years, but everywhere it was fairly easy to distinguish the fruit consigned by the new shipper. The Doncaster fruit was practically all well packed, but some from other districts left much room for improvement, especially in the grading.

One line ex "Cathay" was branded 2⅛ and 2¼. The only difference was the grade brand on the end of the box. This fruit, 50 cases, was sold at 13/-. If it had been properly graded the 2⅛'s would have made 13/- and the 2¼'s 15/- or 16/- a case—surely a big enough difference to pay for decent grading and also making a more saleable pack.

A very noticeable feature of several excellently packed lines of Bosc was an indentation in the fruit from ½ to 1 inch long caused by the side pack and bringing the stalk of one Pear between the side of the case and the next Pear.

This appears to me to be rather a serious matter, and it might pay to pack long Pears such as Bosc end to end.

This is the only variety in which this defect was noticed, but it was very prevalent, especially in the larger grades.

Another matter to which more attention must be paid is the wiring of cases.

There were very many cases of fruit badly bruised just where the fruit had taken the pressure of the wire. Care should be taken not to get the wire too tight and also have it as near the ends of cases as possible.

Continuing, Mr. Garford stated that he had often been asked, "Does wiring pay?" He was of the firm opinion that it did, for not only did it prevent broken cases, but also helped to keep the pack tight. A grower might get through a season without using it, and not have any ullages, but over a period wiring would be justified.

Long Bushel Case Commended.

Cases.—Undoubtedly the best package is the tray. Notwithstanding the high cost of container and increased cost of packing, it is the most profitable to use.

However, owing to the amount of time taken in preparing trays, the majority of growers must look for the next best, which is the long bushel. This has several features to recommend it, one of the principal being that it is distinctive, no other State or country using it, and if a really good reputation for Victorian Pears is to be established something was needed to distinguish the Pears from those exported from some of the other States.

Another very serious matter.

Cases made from green or sappy Pinus insignis must be abandoned, for they mostly arrive in such a mouldy and discolored condition that they sometimes have to be cleaned before the brands are readable and even then they look most objectionable.

Those made from seasoned pine make a fair package, but in many cases the side boards are cut too thin, and owing to the springiness of this timber the sides bulge and cause a lot of bruising.

The case made from imported softwood was the most suitable, being clean, free from stains, and rigid. With a nice label it made a very neat and attractive package.

One great detriment to the use of the long bushel was the large proportion of case-marked fruit, especially in the green varieties, such as W.B.C., Howell, Packhams and Winter Coles. In this container, at least two-thirds of the fruit was in contact with the side of the case. Lining paper did not seem to contain substance enough to reduce the hardness of the sides. Straw board, made with smaller corrugations than that which are now used in dumps would be ideal.

A consignment of Winter Coles ex the "Mooltan" from a well-known Doncaster grower realised 13/- and 15/- a case. The fruit was excellent and in beautiful condition, but badly case-marked: if the Pears had been free from marks, they would have brought 16/- and 18/- a case on the market that day.

Branding and Marking.—Greater care must be taken regarding the branding of cases. Although a large number of growers always brand their cases in a uniform manner, there were many who put the brands on with absolute disregard to system or uniformity. One grower might have his grade mark in the right-hand corner of his first half-dozen cases in a consignment, the bottom left-hand corner of the next three, and then in the middle for the next half-dozen.

Another grower used a stencil plate cut in ¾in. letters, while his neighbor used one made with 1½in. letters. Another always put his Commerce Act brand on the lid, while the next used the end.

These might seem trivial matters, but there was no mistaking the fact that if growers were to make a success of this business, standardisation must be the first thought.

Labelling was desirable—all brands to be concentrated on one end and always in the same position.

While a label should be striking and attractive, its main purpose should be to convey to the salesman and buyer what the case contained, and who packed it. These facts should stand out in bold relief so as to be read at a glance.

English Market.—In the past season, Covent Garden dealt with approximately 1,800,000 packages of South African Pears during the twelve weeks commencing the first week in February—an average of about 40,000 bushels weekly. At a very low estimate these Pears would average 5/9 a tray, and as it took at least four of these trays to make a bushel, the gross result was 23/- a case. These trays each contained anything from 18 to 36 Pears, but the bulk had counts of 24 or 28.

Their fruit was no better than ours, but the position they held in Covent Garden, and the prices they obtained, were solely the results of good packing and organised marketing.

Notwithstanding the large quantities of fruit handled and good prices realised for South African Pears, two shipments of Victorians totalling about 17,000 cases, arriving within a week, were sufficient to place the market in a state of chaos.

The reason was not far to seek, for where South African Pears met a market organised and prepared for their reception, the Victorian fruit arrived and there was no system to regulate and promote its sale. The prices realised for these two shipments probably only averaged 11/6, or at the most, 12/- per case.

That it would have been easy to have obtained 18/- for every case of sound fruit on the two boats by regulated sales, was the unanimous opinion at an informal discussion with two well-known agents and the London representative of a large American packing company.

To anyone who understood marketing, it was very evident that the buyers beat the salesman, and not through any fault of the latter, but because consignments of various sizes were all over the market, and it was impossible to attempt to stabilise prices at a decent level.

Take another instance "The City of Dieppe." Generally speaking, this ship landed her fruit in very good order, and two agents who got early deliveries commenced selling at prices ranging from 16/- to £1 per case.

Later arrivals were spread all over the market, and some agents were only getting 12/- to 14/- for fruit of exactly the same varieties and quality. These latter prices very soon became the general rule—the lower prices had become the buyers' standard, and the salesmen who were getting good prices at the beginning had to come to the level of other agents.

It was not a question of supply and demand; the fruit was wanted, but the buyers got the upper hand, and the salesmen were helpless.

This is the explanation of the wide range of prices shown in the returns from that particular boat.

The method used to prevent occurrences such as these and adopted by South Africa, all the Pacific Coast packing sheds and companies, also British Columbia, New Zealand, etc., was that of appointing about six agents to handle the whole pack, these agents working with the representative of the companies or associations concerned decided what the fruit was to be offered at, and alteration could only be made with mutual consent.

Mark this fact:—The fruit was under the direct control of the growers or districts concerned through the medium of their representatives until sold.

Thus the buyers know it is useless bargaining, for they can only buy at the one price, and it is useless chasing all over the market trying to pull prices down.

Compare this system with the present Australian methods and the advantages of organisation were apparent.

It was considered by reliable Covent Garden agents that their market could be built up and organised to take

500,000 cases of Pears

from Australia between the middle of April to end of June, at prices equal to those obtained from South Africa. Consider what this meant to the grower. For comparison say the South African averages £1 per bushel (it really makes more). Then say we average 18/- (or 2/- less than Africa). Compare this with the past season's returns at an average of 12/- a case (it would not even be as high as that). On the 150,000 cases exported from Victoria in 1930, the growers received £45,000 less than they should have done. In other words, every 100 cases should have returned £30 more than they really did.

This was not a rash statement, it was in reality rather modest, being several shillings under the South African average, and there is no reason why we should not obtain equal results.

Of course, these results could not be obtained in one year, but in two or three seasons we could equal South Africa's prices. The English public paid the same price for Australian Pears as they did for South African. The general range of retail prices was from 8d. to 1/- per pound. Sometimes damaged or spotty stuff sold at 6d., but never less. In some towns Pears were sold by the count, and prices go from 2d. each for small Coles and Keiffers, to 8d. or more for large Pears.

One more comparison. On a certain stand in Covent Garden, there were a few trays of South African W. Nelis, side by side with Bosc, from Doncaster. The Nelis were in counts of 32 to the tray, which would be 2¼ grade fruit, and were selling at 7/- per tray. The Bosc were perfect, and were making 14/- and 15/- per bushel. Yet the Pears were probably retailed at the same price.

During his association with Covent Garden, stated Mr. Garford, he had seen the South African exports increase sixfold, and they are getting better prices now than they were 18 years ago.

Charges.—On looking over account sales, growers would see wide differences in the charges of different agents. They range from 1/- upwards, there was no reason why they should not all be at the same level. A lot of money was lost annually on account of these variations.

Wasty and Wet Fruit.—Growers frequently received account sales which showed several cases, "wet or wasty."

This was sometimes genuine, for perhaps a few cases had been receiving the drips from the grids in the ship's hold, or a case or two might have received rough handling somewhere, and caused the fruit to go specky. This item, however, was very much abused in some cases.

"This is what happened to some of my own fruit this season," continued Mr. Garford. "Please note these dates, the "Orontes" commenced unloading her Pears on May 29; on June 18 I saw 21 cases of my Pears on a certain stand in Covent Garden. They were worthless, for the juice was just pouring out of them. Enquiries elicited the fact that they had only been delivered that morning, 19 days after being discharged. After making some fairly strong remarks I was told that it was usual to get some late deliveries on every boat. I venture to state that this would not be allowed to occur with fruit from other countries.

"I will give two rather interesting experiences which I had in the provinces. The first was at Norwich. In a large fruit shop I saw some Packhams from a grower at Mount Waverley, Vic.; I had seen this fruit sold during the week in Covent Garden for 14/- a case. On asking the shopkeeper what he paid for them, he produced his invoice, 22/- per case. I gave him the name of the commission agent and advised him to get his next supplies direct. This he did, and when I saw him the next week, he was delighted to have got equally as good fruit for 18/-. Here was an instance in which a dealer was taking 4/- from the grower and another 4/- from the retailer. If the thousands of English fruiterers knew where they could always obtain reliable supplies, I am certain it would help immensely to improve prices.

Another instance was at Nottingham:—A high-class fruit shop and with a fine display of fruit, but not any Victorian Pears. I asked the reason, and the owner said that he finished with Australian Pears two years ago. He was rather a fine type of man, and after some little discussion, he agreed to allow me to send him ten cases of Pears on the distinct understanding that he would only pay if they were good. This was on a Saturday. On the following Monday I bought, ex the "Mooltan," ten cases consigned by a Blackburn grower: 5 cases of 2¼ Packhams at 16/-, and 5 2½ grade at 18/-, and forwarded them to him.

I called to see this man the following Saturday, and was very gratified to hear that he was very pleased with the Pears, and that he had since had 30 cases from the same agent from whom I purchased the fruit. That man will undoubtedly remain a good customer for Victorian Pears as long as he is getting the right goods."

Victorian growers, stated Mr. Garford, must cease shipping such varieties as "Caps," Vicars, M. Louise and Broom Parks. They all arrived in a more or less unsatisfactory condition, and even when they arrive sound, quickly deteriorated when in the hands of the retailer, and thereby spoiling the market for good varieties.

The most suitable kinds were Williams, D'Anjou, Howell, Glou Morceau, Keiffer, Nelis, Josephine, Bosc and Packham. The last named was increasing in popularity, and there was undoubtedly a very bright future for both this variety and Bosc, providing the business was handled in the right manner.

Plain Grade.—The shipping of this grade was a very big mistake.

Growers should remember that a case of Pears on the London market incurred to them a liability of 8/-, without considering production costs. Not only would this class of Pear spoil an individual grower's sales in the long run, but would also do incalculable damage to the trade for good fruit.

Although the inspection was more strict last season than ever before, a lot of fruit was shipped which ought never to have left the orchard.

Australia had two large factors in her favor:—

(1) Hundreds of thousands of cases of Oranges are arriving weekly when the South African Pears were on the market. When Australian Pears arrived, these were considerably diminished, and practically finished when the largest shipments got there.

(2) May and June are the months when the London season was at its height, and there were considerably more people in London at that time than any other period of the year.

With regard to other English markets for Pears, it was generally thought that Hull was the only other port worth considering, and that for only a small quantity. Hamburg would take a few thousand cases throughout the season at very payable prices.

Growers must be fully alive to the necessity of shipping to England as many of their Pears as possible every year, and so create an annual season for their product. Once the business was made reliable, the buyers and English public would look for, and expect them every spring.

It was folly trying to use the English market as an outlet only for heavy seasons. The time had come when Pear growers had to decide which shall be their primary object, Sydney or London.

The Past Season's Williams.—All who shipped Williams by the two first boats, "Maloja" and "Baradine," were very disappointed. Growers had been advised of the opinion expressed in England that the Williams Pears were picked yellow: practical growers, however, realised the impossibility of picking yellow Williams so early in the season as end of January or early February.

The real explanation was probably that the fruit was picked immature, and in the case of the "Maloja," carried at rather too low a temperature. The faults were shrivelling, wilting and freezing, and he (the lecturer) was given to understand that all grades had shrunk to under those indicated on the cases. That the fruit was immature was further borne out by the fact that the later boats, the "Orvieto," "Comorin" and "Moreton Bay," all delivered their Williams in good condition, but unfortunately the "Maloja" and "Baradine" shipments had killed the market for this variety for this season.

At the conclusion of the address, Mr. Garford answered many questions. Asked if he thought the desired improvements could be brought about by means of a Control Board, Mr. Garford replied in the negative. Growers could improve marketing conditions through their own organisations.

A hearty vote of thanks was accorded.

VICTORIAN IRRIGATION SYSTEM.

Loss Last Year, £736,000.

The gross deficit of the Victorian State Rivers and Water Supply Commission for the last financial year, including all written off and irrecoverable amounts, was £736,381.

LANCASTER FRUITGROWERS' ASSOCIATION.

There was a good attendance at the annual meeting of the Lancaster Fruitgrowers' Association held during November, the President (Mr. W. F. Cooper), occupying the chair. The financial statement showed a credit of £26/8/-, receipts totalling £391/19/5.

Office-bearers.—The election of officers resulted in the President (Mr. W. F. Cooper), and the Secretary-Treasurer (Mr. T. Hughes), being re-elected. Other officers were elected as follows:—Vice-presidents, Messrs. W. McMaster-Smith and J. E. Toone; Committee, Messrs. R. J. Salmon, D. K. Woods, Jnr., and S. Hallett; Messrs. W. F. Cooper and W. B. Higgs were elected trustees for the new hall. Delegates to Northern Victorian Fruitgrowers' Association—President and Secretary.

The President and Secretary were accorded a hearty vote of thanks for their services. Regret was expressed by the meeting that the Kyabram Co-operative Fruit Preserving Company had failed to have a meeting of shareholders since the last annual meeting.

QUEENSLAND.

Thulimbah, 13/11/30.—Mr. J. Lumb reports as follows:—The principal fruits are Peaches, Plums, Pears and Apples.

The coming crop prospects are fair; estimated percentage, I should say, half compared with last year's crop.

New developments are a few packing sheds to give them a try out.

A good lot of new land was cleared this last winter, and most growers are going in for Apples, such as Granny Smith, Jonathan, Delicious, and some growers are trying out the Lalla and Crofton.

AN IDEAL GIFT.

Canned Pineapples for Friends Abroad.

AN OPPORTUNITY is provided for sending a case of delicious canned Pineapples to friends abroad.

The Committee of Direction of Fruit Marketing, has just issued a neat pamphlet setting out the virtues of Queensland canned Pineapples, and pointing out that for 35/- a case of these healthful delicious fruits will be delivered to any address in Great Britain.

No bother of making purchase, packing, making Customs declarations, etc. Just send 35/-, and a case containing 2½ doz. 30 oz. tins of canned Pineapples will be delivered free to your friends.

Full particulars from the C.O.D. representative, Box 648E, G.P.O., Melbourne.

* * *

Brisbane.—The President of the Brisbane Fruit Merchants' Association is Mr. Wm. Robson. The Secretary is Mr. R. A. Alexander.

WEEDS IN BANANA PLANTATIONS.

Sodium Chlorate Not Recommended for Control.

DISCUSSING in the N.S.W. Agricultural Gazette the problem of weed control in Banana plantations, the departmental fruit instructor located at Byron Bay draws attention to the detrimental effect on nearby Bananas of spraying with sodium chlorate. Adherence to an arsenical preparation is advised, and on account of the ease with which it is dissolved, arsenic pentoxide is recommanded as worthy of a trial.

Every Banana-grower, observes the writer, has experienced the difficulties of keeping weed growth under control during the months of heavy and regular rainfall, such as were experienced from January to June of this year. Under these conditions weeds flourish, and if some means are not taken to suppress them they eventually seed.

The usual methods of chipping and hand pulling, or the use of horse implements where they can be worked, are out of the question in periods of sustained wet weather. Brushing is done by many growers as an emergency control, and spraying with arsenical mixtures is resorted to by others. This latter method would appear to be the only possible way of keeping a plantation free of weeds under the circumstances.

Although good results are achieved by spraying with arsenite of soda or arsenic pentoxide, the handling of poisons such as these is to be avoided if possible, for obvious reasons. When it became known that sodium chlorate had given excellent results in experiments carried out in other parts of the State in destroying weed growth and grass, it was considered that it would be a useful weedicide for use in Banana plantations. Beliefs were entertained that it would replace the arsenical sprays generally used, as it is non-poisonous, readily soluble in water, thus taking less time to prepare, less risky to use, and non-injurious to the soil.

A few Banana-growers decided to give this salt a trial. They sprayed small patches in their plantations, and were surprised to find that it not only killed the weeds, but also affected the Banana plants nearby. Further trials by other growers gave similar results. Mixtures of ¾ lb., 1 lb., and 1½ lb. sodium chlorate to 1 gallon of water were sprayed on the weeds to within about 1 foot radius of the stools, and particular care was exercised to prevent any of the mixture coming in direct contact with the Banana plants. The weeds around the stools were unaffected, which is sufficient evidence that the spray did not touch the Banana plants.

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The effects of the sprayings were noticeable three and four weeks after the applications. The leaves of the Banana plants became dotted with small black pitted and sunken spots. These spots appeared on the leaf blades and along the midribs, and laer developed a purplish-black color. Subsequently the affected leaves turned yellow, became like brown paper, and finally died, although new leaves produced after the applications of spray were unaffected and grew naturally.

The plants naturally received a check, but this was only a temporary setback, for at a later date it was difficult to detect the affected stools in the plantation. More serious damage might have resulted but for the fact that his salt is easily washed out of the soil by rain. The fact that over a month elapsed after spraying before any damage to the Banana plants became apparent can be accounted for by the sodium chlorate taking that length of time to penetrate the soil to the regions of the roots.

In view of the foregoing, sodium chlorate cannot be recommended to Banana-growers as a suitable weedicide. Arsenic pentoxide is now being used for this purpose, and it is just as efficacious as the commonly used arsenite of soda. As the former is more easily dissolved in water, time and labor are saved in preparing this spray, which makes it worthy of a trial. It is put up in various sized tins, on which are printed directions for its use.

THE VALUE OF CITRUS FRUITS.

An experimental diet being tried by Dr. Milton T. Hanke, pathologist of the Sprague Memorial Institute, Chicago, in a fight against the decay of teeth, seems to have proven the efficacy of orange juice, says the "National Bottlers' Gazette." While the citrus fruit juices have long been prescribed by many famous physicians for their health properties, this is probably the first record of an experiment where orange juice, with a little lemon juice added, has been recommended for strengthening the teeth and as a remedy for trench mouth and other diseases of the mouth.

PERSONAL.

Mr. W. R. Lewis, who recently relinquished the Secretaryship of the Berri branch of the South Australian Bureau of Agriculture, after 18 years of service in this capacity, was presented with two upholstered chairs.

The present secretary is Mr. R. Johnson.

NEW SOUTH WALES.

Fruit Crop Prospects.

THE coming fruit crop prospects are set out in a report from the N.S.W. Department of Agriculture thus:—

Cherries.—The favorable crop indications of early September have not been maintained in some districts. In the Orange area early varieties are showing good crops, whilst later varieties are not so promising, and at Young the crop is now reported to be very light on both early and late trees. The fruit in this latter district should be of excellent quality.

Peaches.—The early crop in coastal areas is patchy, ranging from very light to good. In the Richmond-Kurrajong district the crop of this fruit is stated to be exceptionally light.

Mid-season and late varieties at this stage are showing medium to good crop prospects.

Plums.—In the Kenthurst-Glenorie district most varieties of trees are overloaded, and where thinning out has not been resorted to the fruit is likely to be small. In the Hunter district, however, only light yields are expected, as much of this crop has fallen, Shiro and October Purple being the only two varieties to hold their fruit. In other coastal centres fair to good crops prevail, whilst in inland districts prospects generally are good.

Apricots.—A light crop is expected in most centres.

Prunes.—In the Young area the crop promises to be heavy, particularly as regards D'Agens. Reports from other districts indicate good crops of the above-mentioned variety, whilst Robe de Sergeant show light settings.

Pome Fruits.—Apples: In most of the main centres of production prospects are for light to medium crops generally.

On the irrigation area, Granny Smiths, which showed favorable bud development, are disappointing, and have failed to set even a fair crop.

Pears.—On September indications, a predominance of good crops seemed likely, but in some districts, e.g., Goulburn, Young and Orange, the setting has not been satisfactory, and now only light to medium crops are anticipated.

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Citrus Fruits.—Very heavy settings of navel and Valencia Oranges appear to be general in coastal districts. Common Oranges have set heavily in some centres, whilst in others, e.g., Kenthurst, Glenorie, Parramatta and Castle Hill, light to medium prospects are reported.

On the Murrumbidgee irrigation area light blossoming is fairly general on Orange trees, although groves that carried light crops last season promise a good setting of fruit.

Viticulture.

On flat country in the Hunter River district extending from Cessnock to beyond Branxton, a considerable amount of damage was caused by frost; parts of the Cumberland Camden areas have also been affected. The damage varies from 40 per cent. to 80 per cent. on each particular area. Downy mildew has already made its appearance in the northern vineyards, and growers have been warned not to neglect spraying with Bordeaux mixture, as the weather conditions of late have been very favorable to fungi development.

On the holdings in the Murrumbidgee irrigation area black spot has shown up, bud burst in this centre was excellent and vines are making good growth.

MURRUMBIDGEE IRRIGATION AREA.

Fruit Crop Prospects in the Griffith District.

Mr. Gerald W. Beverley, Senior Fruit Inspector, Department of Agriculture, Griffith, N.S.W., who is conducting a series of experiments on spraying and dipping of fruit, advises as follows regarding the coming fruit crop prospects in the Griffith section of the Murrumbidgee Irrigation Areas, N.S.W.

Apples, especially Granny Smith, very light, in many cases trees are entirely bare of fruit. Cleopatras are somewhat better, and in some cases Jonathans are carrying a fair setting, but taking the Apple crop all round, it is very light compared with last season.

Plums light, Prunes moderate to light, Robes light, D'Agens medium.

Wine Grapes appear to be showing well.

Sultanas appear lighter than last season and have in many places showed up a considerable amount of black spot and growers are advised to keep their spray pump going if the muggy weather continues.

Erinose is also showing up on some farms, and a good dusting with sulphur immediately and again when the vines are flowering will be of advantage.

Citrus: good setting on some farms, others light.

Apricots very light.

Elberta Peaches are moderate, but the fruit should be of splendid quality, as it is well spaced.

Canning Peaches appear to be the best setting of all fruits, and the freedom from green aphis this season should mean a very good crop.

Currant and Muscat vines are showing very well—better than the Sultanas. Waltham Cross and other table Grapes, with the exception of Ohanez, shaping well.

Capertee.—Messrs. Sim Bros. report under date November 14:—

The principal fruits grown in this district are Apples and Pears.

Owing to the protracted wet weather during the bloom period (whole of October), the setting was very light; also, thrips, which appeared on the scene, helped to reduce the setting.

The crop is very light all round. About 50 per cent. as compared with last season. (Too early to state estimate of crop until now.)

Downy Mildew Makes Its Appearance in N.S.W.

MR. H. L. MANUEL URGES SPRAYING OF VINES.

DOWNY mildew has already made its appearance in New South Wales vineyards, according to Mr. H. L. Manuel, viticultural expert in the Department of Agriculture.

"The disease is showing up very early this year," Mr. Manuel said,—"If the young bunches are attacked at the present stage they are liable to wither up. Growers are advised not to neglect a spraying with Bordeaux mixture, as any repetition of the weather we have experienced lately—showers and intermittent bursts of heat—will favour the rapid development of spores, and the results will be disastrous.

"It must not be forgotten," Mr. Manuel added, "that even if the bunches are not attacked, the effect of a bad attack on the foliage will be seen in the ripening of the berries. The colour and sugar content may suffer severely. Where the vines are badly affected by the disease they may die out altogether."

Do good to thy friend to keep him, to thy enemy to gain him.—Benjamin Franklin.

* * * * *

We must laugh before we are happy, or else we may die before we ever laugh at all.

* * * * *

Getting money is not all a man's business; to cultivate kindness is a valuable part of the business of life.—Dr. Johnson.

COMET IMPROVED SPRAY GUN

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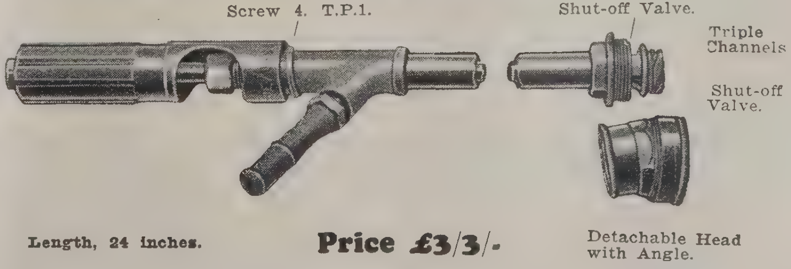

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Fruit Markets in Eastern Asia.

A Comprehensive Survey.

Interesting Information from American Delegation.

(By B. H. Cocheron and W. J. Norton, University of California.)

No. 1 of Series.

TO STUDY THE POSSIBILITIES of the market for fruits in Eastern Asia a delegation was sent from California to examine the field and report.

The result has been the issuing of a Bulletin (No. 493) by the University of California, College of Agriculture, Agricultural Exptrimental Station, Berkeley, Cal., signed by B. H. Cocheron and W. J. Norton. This Bulletin deals extensively with investigation of the fresh, canned and dried fruit markets among Oriental peoples.

As the report is too lengthy and comprehensive to summarise in one issue of the "Fruit World," it is our intention to deal with it in several issues, one or more countries being dealt with each month.

The following summary of the report has been prepared by Mr. J. H. Lang, of Harcourt, Vic., after careful perusal of the bulletin:—

* * * * *

The study was conducted under the joint auspices and authority of the University of California and the U.S. Department of Commerce; the investigators travelled as representatives of both these institutions.

The Canners' League of California and the Dried Fruit Association of California assembled and contributed 45 sets of packages and canned fruit to be used at conferences of importers and dealers. All commercial labels were removed and a non-commercial label substituted.

The Need for Extended Markets.

After the world war, farmers in California growing staple crops such as wheat, barley, maize, beans, etc., felt the immediate effect of the low national prices for their crops. Fruit prices, however, remained high for some years, and many persons expected high prices to continue indefinitely. Between 1920 and 1925 field crops declined in California one and a half million acres, or about 26 per cent. During the same period frantic efforts were made to increase the acreage of fruit crops, and the total fruit average of the State increased 43 per cent., or an increase of 575,000 acres.

The per acre value of farm real estate increased 9.2 per cent. between 1920 and 1925. As tree fruits come but slowly into bearing, no immediate effect of the increased plantings was felt either in volume of production or in price.

In many fruit crops, California has a complete or at least practical monopoly; growing all the commercial Apricots, fresh, canned or dried. It grows all the raisins and 84 per cent. of the fresh Grapes. It produces practically all the dried and canned Pears, 89 per cent. of the dried Prunes, and 56 per cent. of the canned Pears. Any material increase in the Californian production of these fruits represents an almost equal increase in national production.

By 1927-28 the increased plantings were manifesting their production through the increased volume on the market. (See Table 1.)

Table 1. Deciduous Fruit Production, Cal.

	Average. 1919-20.	Average. 1927-28	Per Cent. Increase.
Canned (cases)	12,346,000	18,301,000	+48
Dried (tons)	364,000	575,000	+58
Interstate shipments (cars)	32,500	91,700	+182

Between 1921-22 and 1926-27 the price of Peaches declined 30 per cent., Plums 33 per cent., Prunes 37 per cent., Figs 44 per cent.

Farmers who planted these crops on high-priced land found themselves unable to market the crop at the expected prices. Many could not make a profit on the investment. Some could not make cost of production.

Further, it is anticipated that the peak of production will not be reached until 1932-33, and the normal crop will not be as small as that of 1928 until about the year 1938..

The whole situation has been much discussed among those interested in the financial welfare of California. The situation is so far-reaching that it confronts not only the farmer who is directly interested, but also the business men and tradesmen, as well as the transportation companies who derive a large portion of their revenue indirectly from the fertile lands of California.

Three possible remedies have been advanced:—

(a) Destroy a sufficient acreage to readjust supply and demand.

(b) Decrease costs of production.

(c) Increase demand sufficiently to materially affect prices.

As the first is impracticable and the saving on the second limited, the last shows the greatest possibility of relieving the situation quest for larger markets.

Per capita consumption in U.S.A. has been slowly increasing. Owing, however, to the limitation of the human appetite, American consumption cannot be increased indefinitely. The consumption of foodstuff is relatively inelastic. Under lowered prices demand increases partly through increased consumption, but more largely through waste. Real increased demand for foodstuffs is difficult to create. The consumption of one food is likely to be at the expense of another. Increased production requires increased consumers outside America.

Half the world's inhabitants are congregated in the country of the Far East. Many persons have voiced the theory that these market opportunities should be now fully realised.

Present Exports to Asia.

"Although we are exporting to Europe 39 per cent. of our Apricot crop, 45 per cent. of our Prune crop, and substantial amounts of other fruit crops, we have not exported to Asia one per cent. of any of our fruit crops," continues the report. "A small relative increase in our present Asiatic exports would do little if anything to

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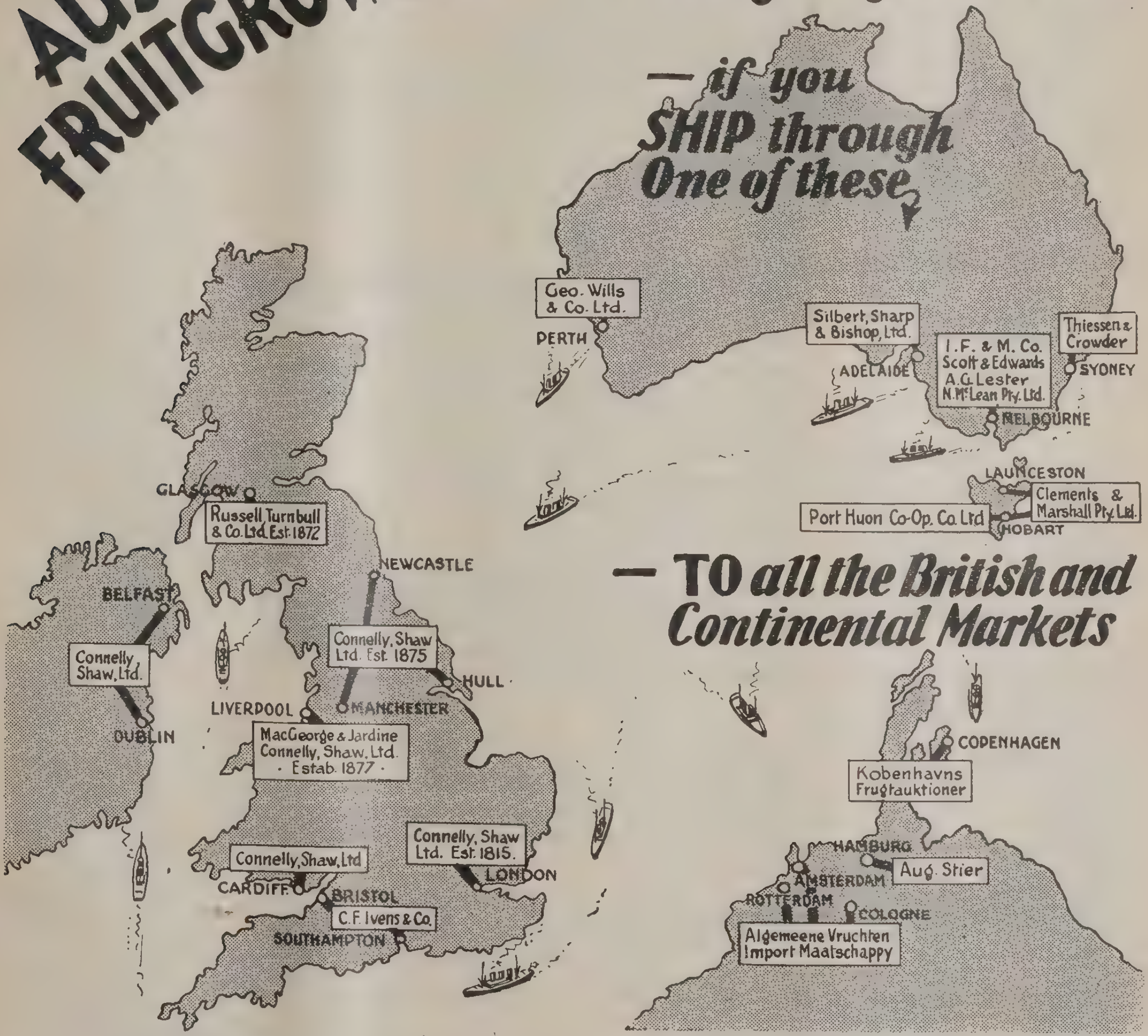
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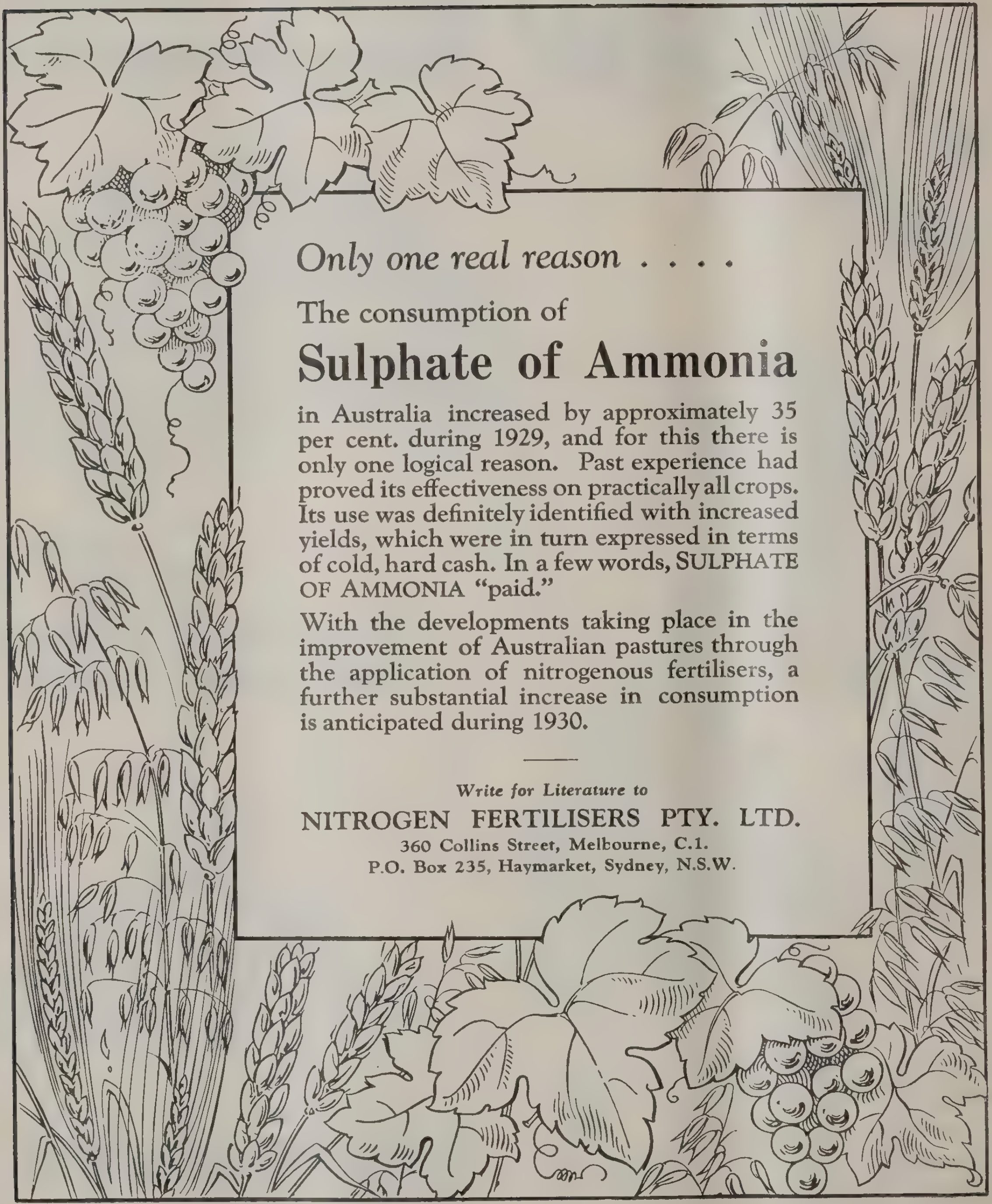

Only one real reason . . . .

The consumption of

Sulphate of Ammonia

in Australia increased by approximately 35 per cent. during 1929, and for this there is only one logical reason. Past experience had proved its effectiveness on practically all crops. Its use was definitely identified with increased yields, which were in turn expressed in terms of cold, hard cash. In a few words, SULPHATE OF AMMONIA "paid."

With the developments taking place in the improvement of Australian pastures through the application of nitrogenous fertilisers, a further substantial increase in consumption is anticipated during 1930.

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NITROGEN FERTILISERS PTY. LTD.

360 Collins Street, Melbourne, C.1.
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change the general price level of Californian fruits. From 1924-28 the average export of fruit is canned, dried, or fresh form, if these be all rendered into the fresh equivalent, was 74,944,864 lbs., or less than 4 per cent. of our total fruit exports."

The investigation seeks to answer the question whether demand exists or might be created among Oriental peoples by which California's markets in the Far East could be increased to a point whereby the economic situation among fruitgrowers would be materially improved.

An attempt has been made to learn:—

1. What the normal food habits of the people are, and what fruits or fruit products a given territory would normally consume.
2. What forms these products should take and size of package.
3. How much of these products and at what prices a tributary territory might consume under proper condition.
4. What trade promotion, if any, is necessary to develop these markets.

The investigators spent eight months in travel; visits were made and investigation conducted in 37 cities and towns. Among these were:—

In Japan—Yokohama, Tokio, Osaka, Kobe, Bippu.
In Korea—Seoul (Keijo).
In China—Mukden, Haibin, Tientsin, Pekin, Shanghai, Hong Kong, Canton.
In Philippine Islands—Manila.
In French Indo-China—Saigon, Pnom Penh.
In Siam—Bangkok.
In British Malaya—Singapore, Kuala Lumpur, Penang.
In Netherlands East Indies—Medan, Batavia, Samarang, Sourabaya, Djockjokarta.
In India—Rangoon, Calcutta, Benares, Agra, Delhi, Lahore, Bombay, Madras.
In Ceylon—Colombo.

Questionnaires dealing with the problem under study were circulated in the interior of Japan, China, Philippine and India, of which 198 have been returned.

Twenty-eight conferences were held with importers and dealers in Californian fruits, the aggregate attendance at which was 458. Interviews were held with 390 persons and organisations, each of which was the result of one or more visits to their offices.

Next month "Fruit Markets in Japan" will be dealt with.

H. WILSON
Wholesale Fruit Merchant and Commission Agent,
No. 10. New Wholesale Fruit Market., Melbourne.
Late Partner in firm of G. WOOLF & SONS.
Bankers.—National Bank of Australasia (Western Branch), Melbourne.
City Telephone: M 2012. Private Phone: M 3055.
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Orders for Apples carefully handled and undertaken for all Overseas & Interstate Markets.
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Consignment shipments solicited on behalf of leading Fruit Brokers and Salesmen throughout England and Continent.

T. STOTT & SONS
Fruit Merchants
Established 1882
A Trial Consignment solicited from Growers in all States.
Prompt Settlement.
26 New Wholesale Fruit Market, Melbourne

Tasmania.

Interesting notes from N.W. Tasmania are to hand from Clements & Marshall Pty. Ltd., of Devonport, dated November 10, as follows:—

The principal fruits grown are Apples—Jonathans, F.C., Pippin, Sturmer, King David, Cleopatra, Democrat.

Blossoming was excellent, and up to the present setting has been equally good, and we anticipate crop will equal last year's quantities.

Pine cases are rapidly coming into favor, and we anticipate more than 50 per cent. of fruit grown in the Mersey Valley will be packed Canadian style during season 1931. Labels also will be used extensively. White Seal, Retriever, Herald, have already been selected in the Mersey Valley, and most probably others will make an appearance during the packing period.

In some orchards dusting is replacing the wet spray, and up to the present there is every indication that this method of pest control will be eminently satisfactory.

Excellent spring weather has induced strong growth all round.

Progressive orchardists are cutting out odd and unpopular varieties—grafting Democrats, Granny Smiths and other profitable kinds.

Spreyton Co-op. Packing Co. installed a Miller Nailer last season—it was an unqualified success in every respect—even though used on dump style hardwood cases, of which one man and one boy made up 750 for an ordinary day's work.

East Tamar.

Mr. B. Hill Saunders, of Hinton Bay, E. Tamar, writes, under date October 28:—At time of writing the Apple crop on the East Tamar is promising well, the earlier varieties: C.O.P. and Jonathans, have set well, and the later varieties have every appearance of doing likewise; although it is rather early to make any definite estimate. I will endeavor to give you a very fair approximation.

Apples.—C.O.P., fair to heavy; Jon. and Cleo., fair to light; S.T.P., heavy; Dunns, medium.

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31 Grenfell Street,
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PARNHAM PTY. LTD.,
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31 Queen St., MELBOURNE.

NEW SOUTH WALES:
BATLOW PACKING HOUSE & COOL STORES, RURAL CO-OPERATIVE SOCIETY LTD.,
Box 48, BATLOW.

WEST AUSTRALIA:
GEORGE WILLS & CO. LTD.,
156 St. Georges Terrace,
PERTH.

NEW ZEALAND:
J. A. REDPATH & SONS LTD.,
37 Johnston Street,
WELLINGTON.

Pears.—Williams, very light; Winter Cole and W.N., heavy; Bosc and Jos., medium.

Present indications point to a 20 per cent. decrease on last season's crop.

Franklin.

Mr. N. B. Barnett, writes, under date October 27:—Our Pear crop is excellent in all varieties; it is rather early to speak positively of the Apples, but it seems fair to good, with the exception of Sturmers, which are light.

Western Australia.

Mr. Geo. W. Wickens, Superintendent of Horticulture, W. Australia, advises, under date November 4, as follows:—Present appearances point to stone fruit being patchy, and the crop will be almost certainly less than that of last season.

The Apple crop following on last year's light production was very promising until just recently, when an invasion of thrips in some of the principal Apple-growing districts upset conslusions. It is, however, as yet impossible to say what the crop will be, for though some districts were badly affected with the pest, other important Apple districts have, so far, entirely escaped damage.

Early Growth in W.A.

THE Government Viticulturist in W.A. (Mr. H. K. Johns) writes in his seasonal report for September:—

Vine growth commenced early this month, and, generally speaking, is well forward. The bud-burst is excellent and a plentiful supply of bunches in the embryo stage are showing. Sultanas are forward and promising. Anthacnose has made its appearance in a slight form. Ideal mild weather prevailed during the month, with plenty of sunshine and intermittent showers of rain.

ANSWER TO CORRESPONDENT.

Australian Fruit Exports.—"F.B.", Brisbane, asks for details of exports of Apples and Pears from the several States in the 1930 season.

Answer.—Shipments were as follow:—

	Apples.	Pears.
Victoria	877,469	150,504
New South Wales	84,600	16,000
South Australia	647,841	19,914
Western Australia	157,381	22,170

Tasmania exported approximately 2,400,000 cases of Apples and Pears.

U.S.A. PACIFIC COAST APPLES.

Following the article in last month's "Fruit World," further reports are to hand regarding the Apple crops of the U.S.A. Pacific Coast (in the States of Oregon and Washington). The forecast for both these States is heavier than last year. The corrected figures are:—

	1929.	1930 (forecast).
Oregon	750,000	1,635,000
Washington	8,300,000	9,627,000

FRUIT EXPORT TRADE.

(The Editor, "The Fruit World.")

Sir,—We are fortunate, this year, in having so much firsthand information about the marketing of our fruit overseas, and there is much of interest to growers in Mr. Chas. Parnham's summary of his impressions abroad.

We find that he confirms in the main what many of us have been urging for years, before Mr. Parnham became a convert to the Canadian standard case, and desired to eliminate F.O.B. sales. It is, however, encouraging to find him making these various recommendations for reform immediately on his return from consultations with buyers overseas. Wise men have always recognised the truth of the saying that "he who pays the piper, calls the tune," and if we are to keep our customers in these days of fierce competition, we must give them, not what we think fit, but what they demand.

We agree with Mr. Parnham in limiting the number of receivers, and so stimulating competition in each port, but we want a good deal more evidence before we would follow him when he says: "Some of the markets lately 'found' can, with advantage, be dropped."

Margetson & Co. Ltd.
Fruit Importers and Salesmen
30 James Street and James Street Warehouses,
11 Neal Street,
COVENT GARDEN, LONDON, W.C.,
and at Jamaica House,
9 and 10 Botolph Lane, London, E.C., and
56-58 Stanley Street, Liverpool.
Sales by PRIVATE TREATY.
Prompt Returns and Settlements.
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Covent Garden Market, London, W.C.
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Lloyd's Bank Ltd., Law Courts Branch, Strand, London, W.C.
Shipping Nos.: 431 and 432.

In a season like this, when Australia and New Zealand sent nearly five and a-half million cases to the United Kingdom and the Continent, surely we want to increase rather than to decrease our outlets, and through direct shipment to other ports, create a wider demand by lessening the cost of distribution.

Is not Mr. Parnham inconsistent, too, when he retains Glasgow and Copenhagen in his list, for these ports are among the "new" markets which we have lately exploited, nor were the returns from these centres any better than those obtained from the markets that Mr. Parnham would reject.

It is true that many of us lost money by our late shipments this year, but we know the causes of this, and that it was a peculiarity of this particular season.

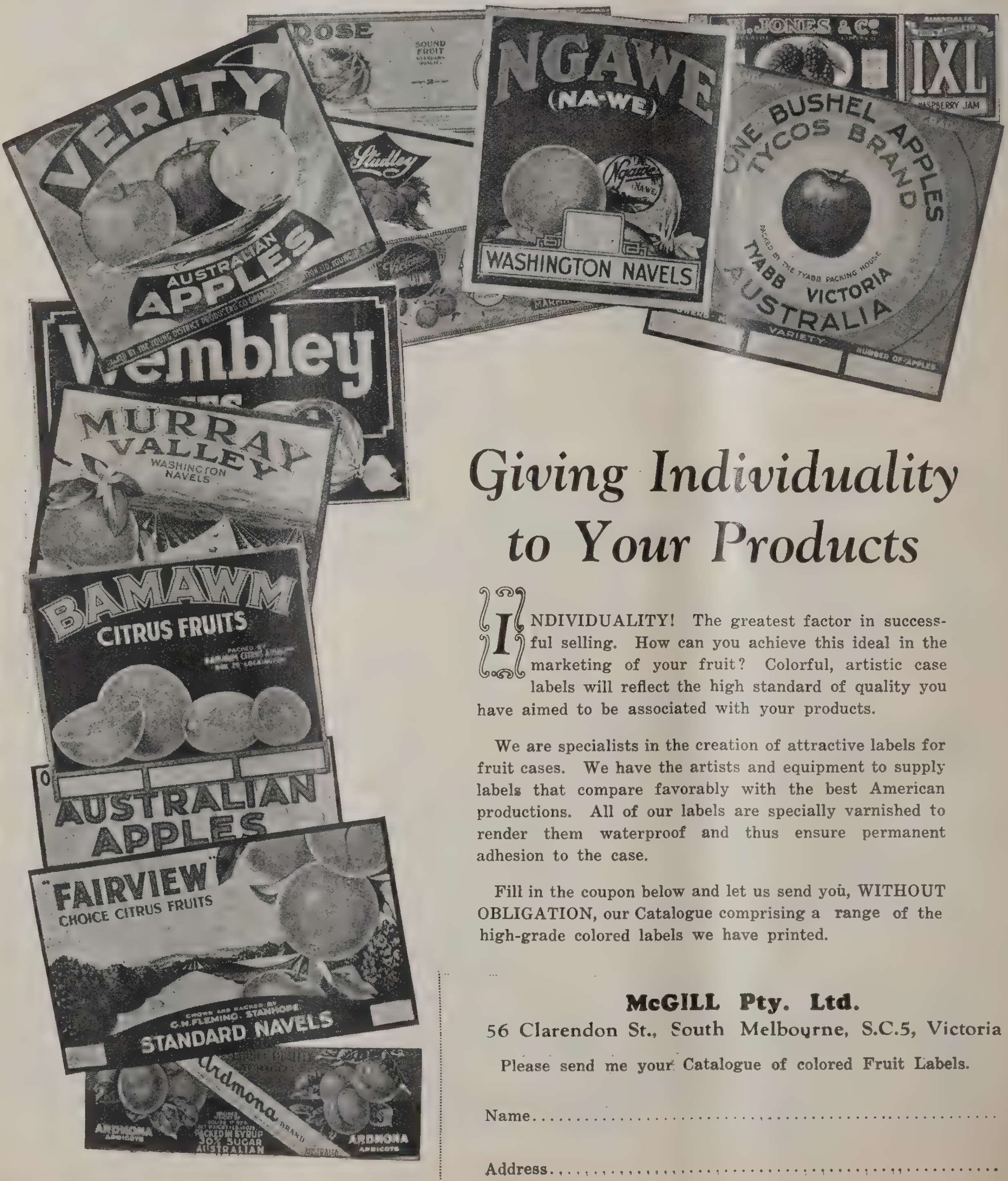
Does Mr. Parnham think that it would have improved prices, if these extra thousands of cases had come tumbling in on top of an already glutted market?

What we want is a shipping programme approved by

CASE AND CAN LABELS DESIGNED AND PRINTED BY

McGILL PTY. LTD.

56 Clarendon Street, South Melbourne, S.C.5. Victoria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INDIVIDUALITY! The greatest factor in successful selling. How can you achieve this ideal in the marketing of your fruit? Colorful, artistic case labels will reflect the high standard of quality you have aimed to be associated with your products.

We are specialists in the creation of attractive labels for fruit cases. We have the artists and equipment to supply labels that compare favorably with the best American productions. All of our labels are specially varnished to render them waterproof and thus ensure permanent adhesion to the case.

Fill in the coupon below and let us send you, WITHOUT OBLIGATION, our Catalogue comprising a range of the high-grade colored labels we have printed.

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Please send me your Catalogue of colored Fruit Labels.

Name..

Address...

a committee representing Australia, Tasmania and New Zealand, so that we could divide our fruit among our markets at reasonable intervals, and in saleable quantities.—Yours sincerely,

Fred. Thomas.

Bunyip, 18/11/30.

"AUSTRALASIAN POULTRY WORLD."

Valuable Monthly Journal.

THE CHRISTMAS NUMBER of the "Australasian Poultry World," issued on December 1, contains a wealth of interesting information for all engaged in the breeding of poultry either as a side-line on the farm, in a suburban back yard, or as a commercial egg farmer.

Amongst the features of this issue are a well-illustrated article on "Intensive Poultry Keeping,'" by Mr. W. C. Rugg, Chief Poultry Expert of Victoria; articles on "Rearing Turkeys for Profit," "Breeding from Yearlings," "Notes on Bantams," "Monthly Reminders," "Feeding Greenstuff," "Show Reports" and "Egg-laying Competition Scores."

A popular Woman's Page and Children's Section are monthly features that assure the "Australasian Poultry World" a welcome in the home by every member of the family.

Copies can be obtained from newsagents (6d.), or direct from the publishers, Horticultural Press Pty. Ltd., Box 1944, G.P.O., Melbourne.

CIDER FOR HEALTH.

An Australian visitor to London, Mr. Arthur E. Whitelaw—the man who gave £1,000 to Don Bradman in recognition of his score of 334 at Lord's—has been propounding to an interviewer a new cure for rheumatism. "I had it for twenty-five years when I lived in Melbourne," he says, "but I cured it by drinking cider—three or four bottles a day."

ORTHO PRODUCTS IN ENGLAND.

The famous two hundred-year-old gardens of the Royal Botanical Society are located at Kew. Volck was tested on many of the most delicate of plants and gave control of mealy bug, all kinds of scale, white fly, and red spider, certain aphids, and other insects. Mr. Orchard, in charge of the tropical houses at the gardens, tested the resistance of delicate tropical plants and found Volck has no ill-effects on practically all of them.

The first year Volck was in England, Mr. Deaver, of the Royal Botanical Society, the garden superintendent, wrote as follows:—

"Several tests have been carried out this summer with Volck, the preparation supplied by you for destroying insect pests on plants and in all cases excellent results have been obtained without the slightest injury to plants. We use 1 per cent. on palms for scale, spider and thrip, and the same on Salvia and Fuchsias for green and white fly; and 2 per cent. for mealy bug. We are pleased to say that in every way Volck promises to be an excellent aid to all horticulturalists, easy to prepare for use, and inexpensive."

RIDLEY & HOULDING
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Specialists in Australian Fruit.

Solicit consignments of Apples, Pears, Etc.

Our record of over 30 years' standing in the handling of Australian fruit, with satisfactory results, is a recommendation for growers to ship their fruit to our house.

Representatives—

International Fruit & Mercantile Company Ltd., Melb., Vic., Australia; and A. J. Walshe & Co., Hobart, Tasmania.

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Leading Australian Firm of Fresh Fruit Exporters.

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CANNED FRUITS—1930 SEASON'S EXPORTS.

The exports of canned fruits to various destinations from the commencement of the season to October 31, 1930, were as follow:—

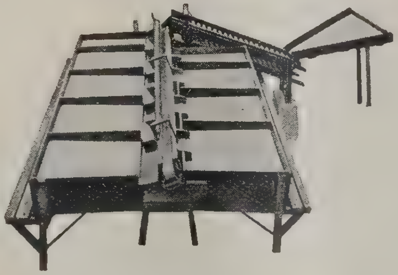
Country.	Apricots.			Peaches.			Pears.			Total.		
	doz. 30 oz.	doz. 21 oz.	doz. 16 oz.	doz. 30 oz.	doz. 21 oz.	doz. 16 oz.	doz. 30 oz.	doz. 21 oz.	doz. 16 oz.	doz. 30 oz.	doz. 21 oz.	doz. 16 oz.
United Kingdom ..	166,534	—	27,084	582,264	—	90,424	219,570	—	42,632	968,368	—	160,140
New Zealand.. ..	23,404	—	1,613	78,127	—	5,285	1,228	—	—	102,759	—	6,898
The East	1,963	—	377	4,132	—	639	3,097	—	487	9,192	—	1,503
Canada	8,832	9,310	5,084	39,922	76,426	30,650	6,480	7,470	1,812	55,234	93,206	37,546
Miscellaneous ..	657	—	201	1,270	—	356	2,540	—	219	4,467	—	776
Totals	201,390	9,310	34,359	705,715	76,426	127,354	232,915	7,470	45,150	1,140,020	93,206	206,863

In addition to the above 193 doz. Apricots and 2,644 doz. Peaches, of miscellaneous sizes, were exported to Canada.

"To Choose the Best is Wisdom"

BETTER PRICES—

CAN THEY BE OBTAINED FOR FRUIT?



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By the use of **Organized Packing Methods and Proper Facilities** the value of the fruit is **increased** and costs reduced. **Fruit well graded and properly packed attracts the right class of buyer.** Special efforts for the coming season will be well worth while and their success will depend greatly on the facilities used.

"Lightning" Equipment is Specially Designed to help you obtain MAXIMUM RESULTS at a MINIMUM COST.

Our Catalogue, No. 7, has just been issued, and shows Models specially designed to help you with your marketing problems. We will be pleased to post you a copy.

Note Our New Address:

The "Lightning" Fruit Grader Co.

517 Albion Street, West Brunswick, N. 12. Melbourne, Vic.

SHIPMENT TO ROTTERDAM.

(To the Editor, "The Fruit World.")

Sir,—In your issue of November 1, Mr. Barker is reported to have said, among other things that—

1. 40,000 cases by the "Port Hunter" arrived at Rotterdam during his visit.
2. That the large quantity knocked the bottom out of the market.
3. That the bulk had to be cool-stored with resultant extra charge.
4. That a larger quantity from the same boat reached Hamburg about the same time, and realised good prices, and
5. That the 40,000 cases sent to Rotterdam could also have been absorbed quite comfortably on the Hamburg market.

The above version is incorrect, and misleading, and as I was responsible for having arranged the shipment to Rotterdam, and as I was further responsible, with my Rotterdam principals, for cool-storing the fruit, I shall be obliged by your inserting the following corrective facts.

Mr. Barker left Melbourne in the "Maloja" on June 3, and as this steamer only arrived at Marseilles on July 4, Mr. Barker could not possibly have reached Rotterdam at the earliest before the first days of July, and, moreover, as the "Port Hunter" arrived in Holland on June 19, when Mr. Barker was still on the "Maloja," the "Port Hunter" cargo cannot have arrived during his visit. Further, as the "Port Hunter" took to Rotterdam 30,000 and not 40,00 cases, it can only be thought that Mr. Barker must be referring to another cargo, but not from Australia, as there were no shipments to Rotterdam from Australia later than the "Port Hunter."

Mr. Barker is incorrect in his statement that this large quantity knocked the bottom out of the market, and is equally misleading in advancing his contentions Nos. 4 and 5.

I was in Hamburg and in Rotterdam at the relevant times, and know that his statements canont be supported by facts. The brokers' circulars reporting on the sales of these and previous dates, also confute his attempted arguments.

On June 4, Hamburg recorded a serious drop in values, principally because of the very warm weather, and the larger quantities available. There was a further weakening of values on the 12th because of the continued hot weather and important arrival of soft fruit. On the 19th there was a further serious drop in prices for the same reason.

On June 26, the Hamburg brokers recorded that again, for the same reasons, there was no demand at all for Apples and that the market nearly collapsed. One broker reported that the prices were absolutely disastrous, and that buyers were making enormous losses on their previous purchases, which they could not move.

It must be noted that in order to relieve quantities on the Hamburg market, the brokers split the sale of the "Port Hunter" by offering 22,000 Victorian on the 19th and 15,000 South Australians on the 26th June.

It is plain to anyone with an elementary knowledge of marketing, that to have added a further 30,000 cases to the market at that time, would have made results worse for everybody, and that it is incorrect for Mr. Barker to maintain that an additional 40,000 cases could have been absorbed quite comfortably at good prices.

Having regard to the disastrous tendency of the Hamburg market, it was apparent to my Rotterdam principals and myself that only correspondingly low values could be expected were we to sell the "Port Hunter," ex quay on arrival, especially having regard to the excessive heat (86 deg. in the wharf sheds), and we decided that it was in the best interest of our clients to get the shipping company to agree to discharge straight into cool stores. Despite a great deal of unnecessary trouble having been caused us by the holders of 3,000 cases, out of the 30,000, we eventually succeeded in our arrangements, and results have proved that the measures we took were of great benefit to our friends.

The Rotterdam cargo, ex the "Port Hunter," was offered in various parcels as opportunity offered. The Trade Commissioner for Victoria was present at the first sale of July 3, before Mr. Barker had left the "Maloja," and the Trade Commissioner went out of his way to thoroughly approve of the manner in which the sale of this cargo had been treated.

The general results have admittedly been low, but a comparison of quotations easily proves that our friends have substantially benefited from the action taken. It would have been much easier for us and less costly to us not to have gone to all the trouble we took, but it will be agreed we did all we could to protect our friends under very trying circumstances. At any rate, whilst the ultimate results are certainly a great deal better than if the fruit had been sold immediately on arrival, they might conceivably also have been even much better had markets improved meantime, so that whilst nothing was lost, and a little gained, even more might have been gained.

Regarding Mr. Barker's general statement that he does not recommend large shipments to Antwerp, Bremen, Amsterdam, and Rotterdam, all conversant with marketing, know that the present Belgian duty is a serious drawback to business from Australia, and no one will take exception to his recommendation regarding Bremen, but one certainly cannot agree with Mr. Barker about Holland, having regard to the quantities of fruit regularly imported, unless Mr. Barker is right and everyone else wrong.

Figures available show that in 1928 Holland imported over 2,500,000 bushels of Spanish Oranges, and 1,223,000 boxes of Apples from America, not to speak of other imports.

From figures lately published by a Tasmanian exporter for the following season, up to February 1, 1929:—

Hamburg imported 1,837,000 cases American Apples.

Rotterdam imported 1,667,000 cases American Apples.

For the 1930 season, American figures are (August 1 to September 27):—

Hamburg—180.012 B/s.
Rotterdam—129.707 B/s.

Your readers can draw their own conclusions.

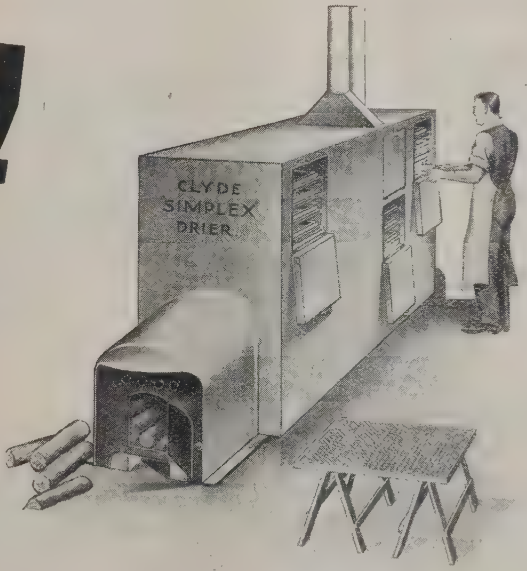
Yours faithfully,

H. G. COLOMBIE.

A friend that you have to buy won't be worth what you pay for him, no matter what that may be.

* * * * *

It is all a mistake that we cannot be good and manly without being scrupulously and studiously good. There is too much mechanism about our virtue.



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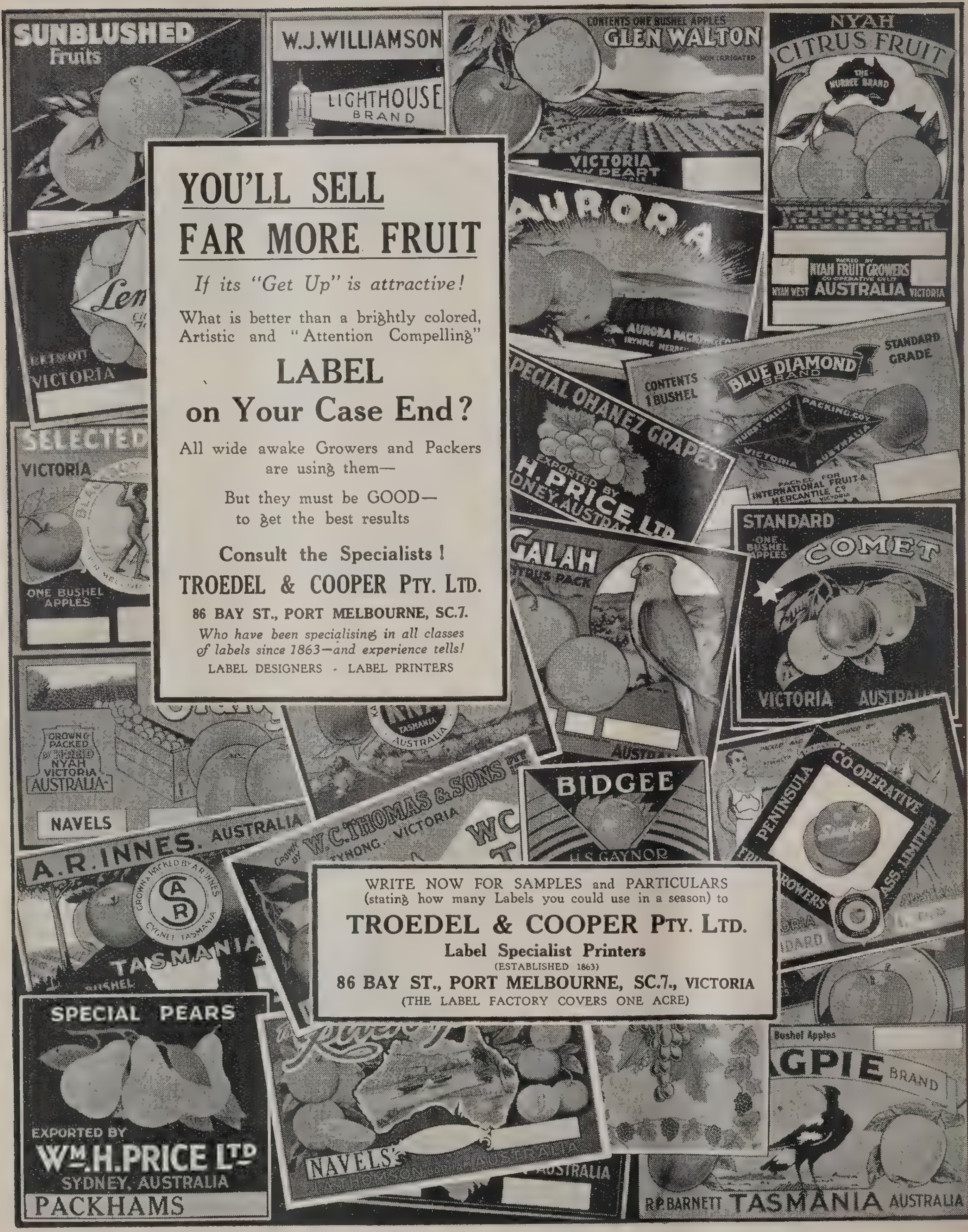
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MELBOURNE
An Important Market for Fruit

Trade Concentrated in New Wholesale Market

Bigger and Better Facilities Appreciated by Wholesalers, Retailers and Growers.

Interesting Notes and Comments

THE IMPORTANCE OF MELBOURNE as a market for fruit is being more fully realised year by year. Growers in Victoria, as well as those in the other States, in developing this market, are seeking to supply the class of fruit desired by the people. This aspect is worthy of still closer study, and to that end fruit-growers' organisations in the several States, who send their fruit to Melbourne, have trained men employed actively co-operating with wholesale and retail fruit traders to secure the highest possible efficiency in fruit marketing.

The population of Melbourne and suburbs is over a million. In addition to the fruit necessary for this big aggregation of people, Melbourne is so situated geographically as to be a most effective distributing centre for the country and Interstate trade.

It is true of Melbourne, as of all other cities, that a trade exists for grades in the population. There is a very high-class trade, through which can be absorbed the hot-house and super quality fruit; this business, though substantial, has its definite limitations. Then there is the trade for the great average bulk of the people. Thirdly, there is a limited market for lower grade fruit. As regards the last-mentioned, it is worthy of note that the people are being steadily educated to securing standard grades as being really more economical, and having less waste.

The opening of the new Wholesale Fruit Market is an event of the first importance in the history of the fruit industry not only of Victoria, but of Australia as a whole.

The improved facilities for receiving the fruit, for displaying it and for despatch all make for sound development.

Previously, the wholesale trade was established in and around the Western Market. That market being too small, wholesale fruit merchants had their premises in the adjacent streets, with the result that retailers had to cover a considerable distance to secure all their supplies. This involved loss of time, extra haulage, and general inconvenience, while the wholesale fruit business, as such, lacked the concentration so desirable from the sales point of view.

With wholesale fruit marketing now concentrated at the new market, steady improvement will be possible.

Certainly, there are differences to be adjusted—as to the opening hours and matters of detail. It may be necessary to go through with a full, busy summer season before the business "shakes down" to its best efficiency. With the co-operation of growers, wholesalers and retailers, the best results will be secured.

There is one matter, however, on which there is general agreement, and yet the trouble persists—too much "rubbish" is sent to the market for sale.

The ideal would be for this obviously inferior fruit to go into some form of processing or manufacture—into cider, vinegar, evaporated fruit, essences, fruit drinks, fruit pies, and the like.

Although, at first glance, this might be deemed to be a matter for the growers to decide, yet, upon consideration, it will be found to be one which vitally concerns the whole trade and the industry at large. In fact, the growers would welcome some lead from the business men who are performing such essential services in marketing.

The bald fact remains that far too much rubbishy fruit comes on to the market. It clogs the trade, brings down prices, and generally impedes business.

This subject is one which is worthy of very careful consideration. We should not lag behind other countries. We should be alert to observe improvements in grading, packing, types of cases, manufacture of by-products, trade organisation, and every means that would assist the soundest development of the Australian fruit industry.

Another subject which is worthy of consideration is that of selling fruit by number, instead of by weight. As a matter of fact, quite a lot of fruit is now sold by number—oranges, lemons, passion fruit, bananas. Apples and pears, however, are still sold by weight in most Victorian shops, though it is noticed that the Railway fruit stalls sell their fruit by number. In the other States, the practice of selling by number has been long in force.

Whatever difficulties, in the past, stood in the way of this much-needed reform, it is probable now that, with improved grading regulations, the time has arrived for Victoria to discard the "selling by weight" system. There is always the difficulty of retailers supplying fruit to customers to just turn the scales, or else give over-weight, plus the time necessary for weighing.

Other States Are Interested.

Fruitgrowers in the several Australian States are keenly interested in the new wholesale fruit market in Melbourne.

The capital city of Victoria receives fruit from every Australian State. Growers are in touch, either personally or through their representatives, with the wholesale fruit distributors. Over the years, confidence has been built up,

Growers

Send your Fruit to—

SILK BROS.

Fruit Merchants

Largest Handlers of Fruit and Vegetables in Australia.

A group of buyers and sellers in front of Silk Bros. new stores in the Wholesale Fruit Market, Melbourne.

24-25 Wholesale Fruit Market, Melbourne

Highest Market Prices—Prompt Settlements

Bankers:
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it being generally recognised that the wholesalers are alert to do their utmost for the growers.

Fruit and vegetables are sent to the Melbourne market from the several States thus:—

Queensland.—Pineapples, bananas, custard apples, mangoes, papaws, passion fruit, also strawberries (in cold storage); also peas, beans, sweet potaoes, etc.

New South Wales.—Oranges, lemons, grapefruit, passion fruit.

Tasmania.—Apples, pears, berry fruits.

South Australia.—Oranges, lemons, tomatoes, celery.

Western Australia.—Apples, pears (in times of shortage, these fruits in the Eastern States), tomatoes (in ships' cold storage).

Victoria.—The full range of fruits, including apples, pears, grapes, plums, peaches, nectarines, apricots, passion fruit, berry fruits, oranges, lemons, etc.

MELBOURNE MARKET CALENDAR.

The following is a general guide for the supply of fruits, etc., to the Melbourne market:—

June.—Navel oranges, mandarins, lemons, apples and pears (ex cold store), pineapples, bananas.

July.—Apples and pears. Citrus season in full swing. Celery offering from South Australia.

August.—Local and Interstate oranges, mandarins, lemons, grapefruit, apples and pears. Queensland fruits include bananas, pineapples, custard apples, granadillas, guavas, etc. This is usually the end of the Queensland citrus season. South Australian celery offering.

September.—Navel oranges in full supply, also mandarins and grapefruit. Late Valencia oranges on market. Cucumbers and tomatoes from Bowen, Queensland. Hothouse tomatoes, also celery, from Adelaide. Tomatoes usually bring good prices from September to November. Beans and peas from Queensland command fair prices.

October.—Same as September. Preparations are made for handling the coming soft-fruit season.

November.—Early November local cherries are offered, also gooseberries, strawberries and loquats. Mandarins usually finish at the end of November. Cold store apples and pears are still being marketed. Queensland fruits include bananas, pineapples, mangoes, passion fruit, papaws, tomatoes, also beans and cucumbers. South Australian tomatoes still command good prices.

December.—The local soft-fruit season is now in full swing—cherry plums, apricots, strawberries, loganberries, local tomatoes. Cold stored apples still available. Towards the end of the month, peaches, plums and figs come on to the market. Valencia oranges offering. Good dessert peaches are generally in strong demand.

January.—Plums, peaches and apricots in full supply, the last-mentioned finishing towards the end of the month. Early pears from Goulburn Valley and southern district appear. Nectarines come on in January for a few weeks. Grapes begin at end of January, and run on till May. (Up till the time of the embargo, oranges and lemons from California, and lemons from Italy, were available at this time of the year.)

February.—Victorian tomatoes still in full supply; early apples (Williams' Favorite, Gravenstein, etc.), pears, oranges (ex cool store), local grapes and peaches.

March.—Tomatoes, new season apples in many varieties (Gravenstein, Jonathan, Fameuse, etc.), pears, peaches.

April.—A plentiful supply of local apples and pears, passion fruit, second crop strawberries, mushrooms.

May.—Apples and pears, passion fruit.

Interior View of the New Wholesale Fruit Market.

Consignments of All Classes
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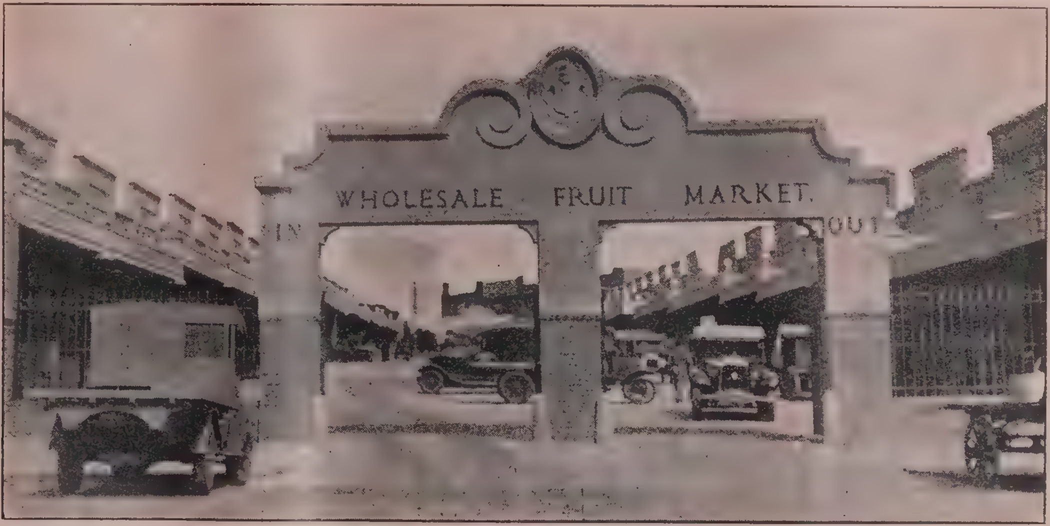
We have entered into our new premises at the Wholesale Fruit Market, carrying with us a successful business which we have established over a period of half a century. Our new and spacious premises are centrally situated and lend themselves admirably to the conduct of trade, both in receiving and disposing of fruit entrusted to our care. We thank numerous friends and supporters for past favors, and assure them our best efforts on their behalf in the increased activities of the wholesale fruit trade.

Bankers: —The Commercial Banking Co. of Sydney, Melbourne Branch.

THE NEW WHOLESALE MARKET.

Up-to-date and Convenient ∴ Cost £100,000 ∴ Estimated to Effect Savings of £50,000 Annually.

The story of Melbourne's markets is a romantic one, for they are closely associated with the birth of the colony that is now the State of Victoria. When John Batman left Van Diemen's Land in 1835 to seek out new land, fate brought his little company of adventurers and himself to the landing place at the foot of William-street, where the Custom House now stands. He built his home on the high ground, which is now the corner of William and Collins streets, and within a few yards of the ground that was afterwards allotted for the building of the first market.



The New Melbourne Wholesale Fruit Market, showing its spacious lines and up-to-date construction.

Within a few months of Batman's landing, another party, headed by John Pascoe Fawkner, arrived at the same spot, and proceeded to make themselves comfortable. They were warned off by Batman, but refused to be intimidated, and proceeded to cultivate the land now occupied by the old Western Market. Live stock was brought across from Tasmania, and the first crop of wheat was taken from land that stretched from the river frontage to Collins-street. When the news reached Tasmania of the wonderful new country across the Straits, many new settlers arrived at the historic landing place of Batman and Fawkner, and a tiny village took shape that was afterwards to become the city of Melbourne.

We are indebted to Mr. G. B. Minns, Superintendent of Markets, for the following historical factors:—

In 1836 the population of Melbourne was reported as numbering fifty persons. Four years later the population had jumped to 5,370, and the Government in Sydney received £220,000 from sales of land.

In fact, the effort to start a market was the birth of local government in Victoria. In October, 1839, the Parliament of New South Wales, of which Victoria, or the district of Port Phillip, as it was then called, was a part, passed an Act to authorise the establishment of markets in the towns in the colony. Soon afterwards some of the inhabitants of the little village, who desired to have a market, tried to organise one, but it was impossible to do so, because as there was no local government in force, commissioners to control the proposed market could not be elected.

On January 21, 1841, a public meeting was held to initiate a movement to obtain a market. On the 12th of the following October a further meeting was held, when claims for enrolment on a citizens' roll were registered. A roll was subsequently prepared and on November 2, 1841, an election was held, when the following gentlemen were elected to act as Commissioners of the market:—James Dobson, John P. Fawkner, John Stephen, Major St. John, John I. Peers, George Arden, F. McCrae, and James Simpson. Subsequently Mr. Simpson was appointed Chairman.

In the same month, Superintendent La Trobe authorised the Commissioners to use the site of the present Western Market for the purpose of a market, and there, on December 15, 1841, or 89 years ago, the first market was held.

In December, 1842, the town of Melbourne was incorporated and the control of the market was transferred to the new council.

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The young town quickly expanded, and it was soon demonstrated that the site of the market was unsatisfactory. On December 5, 1844, a petition was presented to the Town Council to organise a market at the east end of the town, and in 1847 a market was commenced on the site of the Eastern Market.

In 1853 the buildings at the Western Market were burned down, and the market gardeners and dealers who had been operating there were transferred to the Eastern Market, which then developed into the main produce market, while the Western Market, after the erection of the new buildings, gradually developed into a wholesale fruit market.

In 1877, the City Council determined to demolish the old sheds at the Eastern Market and erect the structure that now occupies the site. To provide accommodation for the growers who were thus dispossessed, a market was organised on the site now known as the Queen Victoria Market, and the first market was held on March 20, 1878. During its history of over 52 years this institution has gradually expanded, and now it is recognised as one of the greatest produce markets in the world.

New Wholesale Fruit Market.

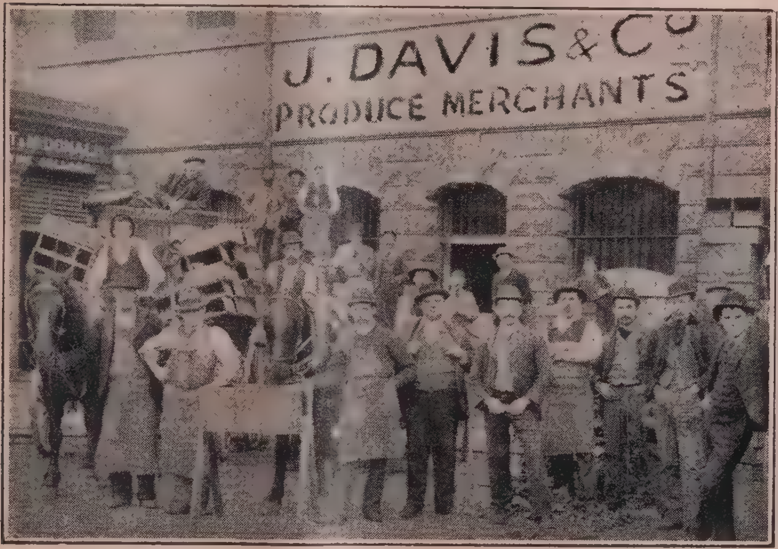
THE LATEST ADDITION to this market is the erection of stores for the wholesale fruit trade, which, up to the present, has been carried on throughout the city, but mainly at the Western Market.

In the scheme there are 60 stores, arranged in six blocks containing ten stores each, and fronting Peel, Franklin and Queen streets. The total frontage to the three streets is nearly 1,500 feet. The stores vary in area from 800 to 1,750 square feet. The total area of all the stores is nearly 79,000 square feet, which is well over three times the area of the fruit stores at the Western Market.

The buildings are constructed of brick and are one storey in height. Provision has been made for the erection of an extra storey should such addition be warranted. The stores are mostly 16 feet high. They have concrete floors, and have been designed with ample light and ventilation. Precautions have been taken to keep them cool in summer and to make them vermin-proof.

All the stores have two frontages and most of them have carriage ways right through to provide for the expeditious handling of goods. The four blocks in the main or southern section front on to a market square, which extends from Peel-street to Queen-street, and is 538 feet long by 100 feet wide. The stores on the two sides of the square are provided with 18 feet wide cantilever verandahs, and similar verandahs have been erected over the footpaths on the three street frontages.

The market square and the roadways through this new section are constructed of reinforced concrete with an asphalt surface. The market square, which has an area of nearly 54,000 square feet, will, with the surrounding streets, provide ample parking space for the many vehicles that will be used by the buyers and sellers who operate at the market. The cost of the complete scheme is approximately £100,000.



Looking back 35 years. A picture taken in the old Western Market.

Names (left to right).—Front Row: Messrs. B. Love, C. Davis, A. Youlden (deceased), J. Lyons (deceased), A. Millis, Jnr. (deceased), F. Billett, W. Lovell, — Morgan.

Centre Row. — On waggon: Messrs. T. Millis, B. Youlden.

Back Row.—Messrs. W. Sweetland (on top waggon), — Stewart (deceased), ———, McDonald (deceased), Albert Fox, W. Davis, J. Crawford, — McFean (deceased), F. Leversha, ———.

Fruitgrowers Will Benefit.

The concentration here of the wholesale fruit trade of the metropolis will have a far-reaching effect, because every orchardist throughout the State, however far away his orchard may be, who consigns fruit to Melbourne, will be directly benefited. The extent of the business conducted here is so great, and the new stores provide such improved machinery, that competent authorities have stated that the annual saving to the community will reach from £50,000 to £60,000.

DAVID SMITH Pty. Ltd.

(Established 1885)

Fruit Vegetable and Produce Merchants

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TELEPHONES:
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The concentration of this trading at the New Wholesale Market will not only improve the conditions of the distant grower, it will also be of supreme advantage to the nearer grower who desires to sell his produce in the market, but who cannot obtain a permanent stand on the old market days; because this concentration will further inevitably lead to a great development of the extra markets for growers, which were commenced about three years ago. Now that **fruiterers and greengrocers** and other distributors can purchase all their supplies at one centre, large numbers have decided to patronise the new markets, and as hundreds of stands are available, every grower who needs a permanent stand can be satisfied. It is anticipated that soon the conditions here will be similar to those which obtain in Sydney, where the biggest markets are held on Friday and second largest on Monday.

A scene at Howard Smith's Wharf, Melbourne, 25 years ago, showing fruit inspectors examining Oranges from New South Wales. When the photograph was taken the fruit fly was prevalent, and sometimes the inspectors condemned a whole line of fruit because of the presence of one infected Orange. Up-to-date methods adopted by growers make the recurrence of such a scene unlikely. Death has taken some of the men in the group, but several are still with us.

Reading from left to right:—(1) F. Kruger, (2) W. Connor (fruit inspector), (3) J. W. Mason, (4) H. Davis, (5) H. Cleland (fruit inspector), (6) P. McMurray, (7) J. Coffey, (8) F. Millis, (9) H. Frankel. The three men on top are J. Hyman, F. Billet and W. Mann.

—Photograph supplied by Mr. Mason (J.W. Ross).

After the erection of the new buildings, there still remains a large area of vacant land on which can be erected, in the future, such additions as may be required.

Historical Notes and Comments

WITH the removal of the wholesale fruit salesmen to their new premises at the Victoria Markets, a retrospect of the old market's activities would possibly prove interesting.

It was during the year 1848 that the New South Wales Government presented to the Town of Melbourne, under charter, the area upon which the market was built, and the Melbourne Council sub-let the land, under a building lease, to one "Money" Miller, who erected the present building.

During its period of utility, the market saw many changes, both in tenancy and condition, not the least interesting being the changes in the variety of vehicle in use for the cartage of fruit—from the old-fashioned float to the motor truck of to-day. No less interesting is the style and change of the package in use for fruit marketing, from the old-fashioned flat case (pill box, as it was called) to the smart Canadian bushel case of the present period.

Of the earliest tenants, all have died, yet such names as those of Alfred Millis, John Fox, P. L. McMahon and Joseph Davis remain perpetuated in the memory of those who succeed them, while, of the old firms still operating by a younger generation, may be found the well-known names of George Lister, A. Millis, J. Davis, W. S. Tong and J. W. Ross.

LISTER & WHITE

A scene at the Western Market 40 years ago. At that time the firm of Lister & White were doing a large business with citrus from Mildura. Oranges from Mildura were sent down in cases that contained 3½ to 4 bushels of fruit, and were repacked at the market into bushel cases. Note the covered waggon used in those days by the fruit merchant.

There was much dissension and regret shown by the old tenants at having to leave old and familiar surroundings, yet all recognised that the old market was failing to meet requirements, both in storage accommodation and that of traffic, while the new market offers such advantages as will bring this important trade up to date,

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Correspondence Invited.

When Mr. Alfred Millis, senior, first went into the business, half a century ago, he was associated with such old-timers as Messrs. R. Duff, J. Mills, J. Catmull, J. Davis, J. Fox, W. H. Ikin, W. S. Tong, E. Fountain, J. & C. Turner, J. Power, C. Brown, J. Twyford, W. Winrow, McMahon, Allan, Moller, T. Mann, F. Gilmore and others, who were early occupants of the Western Market. Another old identity of the Western Market was H. Evans, a poulterer, who did a big business alongside the fruit merchants. They were a conservative crowd in the early days, and it was very difficult to buy into any of the stores, no matter how big the inducement offered. Eventually, Mr. Millis bought out Mr. W. H. Ikin, and entered the charmed circle. He also conducted sales at the Victoria and South Melbourne Markets, and established a large business in other States, as well as in Victoria. Most of the old occupants of the Western Market have departed this life, Mr. Millis among them, but the names of Millis, Davis and Tong still figure largely in the fruit trade.

In the early days of the Western Market, fruit was out in all weathers from Friday until Monday, and it was nothing to find a thousand cases of fruit on Monday morning fit only for the tip. This meant big losses for both grower and wholesaler. There will be no such losses at the new market, where every case will be under cover.

It is rather remarkable that some of the earlier Western Market occupants did not build a market for themselves, with provision against all weathers. Had they pooled their interests and carried out a building scheme when land and labor were cheap, they would have been in a stronger position to-day.

ORGANISATIONS.

FOR MANY YEARS the Wholesale Fruit Merchants' Association of Victoria has been very active to be of service to the trade and the industry. In addition to attending to matters of internal detail, the association has attended to growers' interests regarding claims on railways and shipping companies, and has assisted in every way possible to develop the wholesale trade on sound lines. The association regularly sent delegates to the fruit-growers' conferences. The growers appreciated the attendance of the merchants, and mutually beneficial results have accrued.

The executive of the Wholesale Fruit Merchants' Association carried on many delicate negotiations during the time the new market project was under consideration.

The president is Mr. H. M. Wade, and the secretary Mr. J. D. Fraser.

The Queen Victoria Fruit and Vegetable Merchants' Association is an established organisation. The president is Mr. L. Rockman, and the secretary Mr. D. Hyman. This Association has been actively at work to develop the trade, and the various matters attended to have been in the line of progress, realising that steady improvements mean better service to the growers and the industry as a whole.

Melbourne and Metropolitan Retail Fruiterers' Association.

The retailers also have their association. This is called the Melbourne and Metropolitan Retail Fruiterers' Association, the secretary of which is Mr. E. W. Thompson.

This association is a successful one, and many improvements have been brought about in the trade because of its activity.

The opinion is held that the best results are obtained where the industry is viewed as a whole, recognising the essential services of the wholesaler and retailer co-operating with the grower. The Retailers' Association has also accepted the growers' invitations to be present at their conferences. The association has expressed willingness at all times to consider any matters brought forward by the growers or the wholesale trade which would tend towards the betterment of the industry.

The Chinese Fruit Merchants have an effective Association, the Secretary of which is Mr. Kenn.

Fruit Trades Federation Suggested.

At a recent meeting, the suggestion was made by the President of the Wholesale Fruit Merchants' Association (Mr. H. M. Wade) that the time was fully due for the formation of a federation of fruit trades associations. Such an association would improve the existing organisations and provide a central authoritative clearing house for matters of policy. It is certain that this subject is worthy of very definite consideration.

Fruit-growers' Representatives.

Fruit-growers' associations have found it to be of advantage to have representatives in daily attendance at the Melbourne markets for consultative purposes and generally to maintain the ethics and standards of the trade.

The Federal Citrus Council has its representative (Mr. George Kitchin-Kerr), a diligent officer, whose marketing reports at the citrus conferences are always followed with the keenest of interest.

The South Australian Fruit-growers and Market Gardeners' Association is represented by Mr. C. W. McRostie. In the handling of South Australian celery, tomatoes, etc., Mr. McRostie in co-operation with members of the Wholesale Fruit Merchants' Association, has rendered good service. He pays periodical visits to South Australia, and has assisted the good work of organising the growers.

The Committee of Direction of Fruit Marketing, Brisbane, is represented by Mr. C. G. Parnell. Mr. Parnell is thoroughly conversant with the fruit districts of Queensland, and, in addition to attending to the growers' interests on the markets, Mr. Parnell has done valuable publicity work to increase the consumption of tropical fruits.

Mr. Parnell attends to the fruit trains, which now arrive four days a week for the Melbourne markets, the fruit being distributed to the various agents for sale, and any comments as to the quality or condition of the fruit on arrival are immediately notified to the Queensland organisation and the growers.

Before this new service of four trains per week came about, the running time for Tuesday's loadings was 116 hours. Under the new time table it is only 89 hours; and for the old Friday's loading of 114 hours it is now only 89 hours.

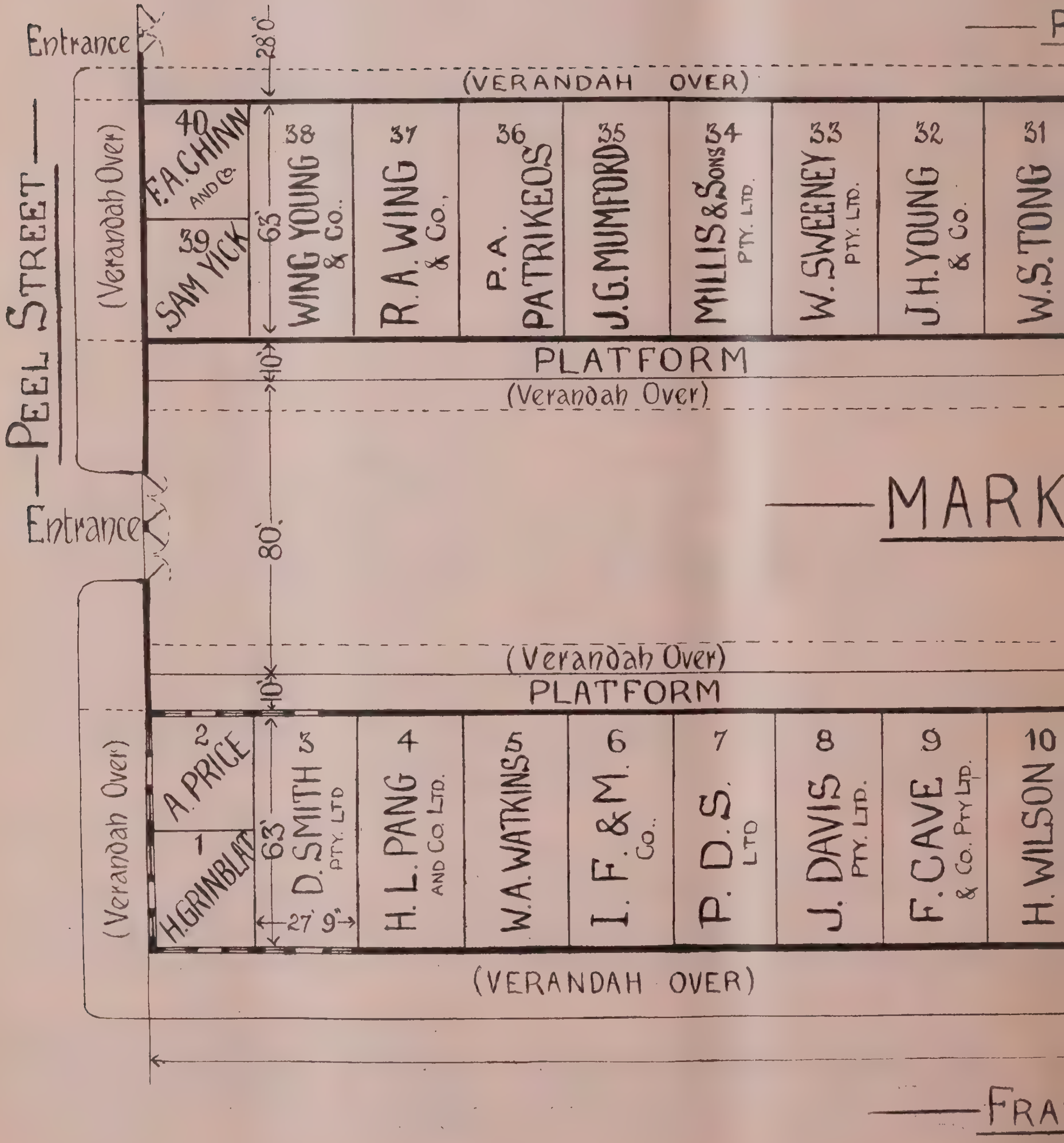
The trade from Queensland is very considerable, there being between 2000 and 2500 tons coming forward monthly. Bananas are received green, in considerable quantities, there being in Melbourne several efficient ripening rooms, conducted by members of the wholesale trade.

Advertising Fruit.

One subject which has exercised the minds of the growers and the trade has been that of advertising to increase the consumption of fruit. Various efforts have been made from time to time, but these have been on a fairly limited scale, and the question has arisen as to the possibilities of united effort to deal with this very important subject.

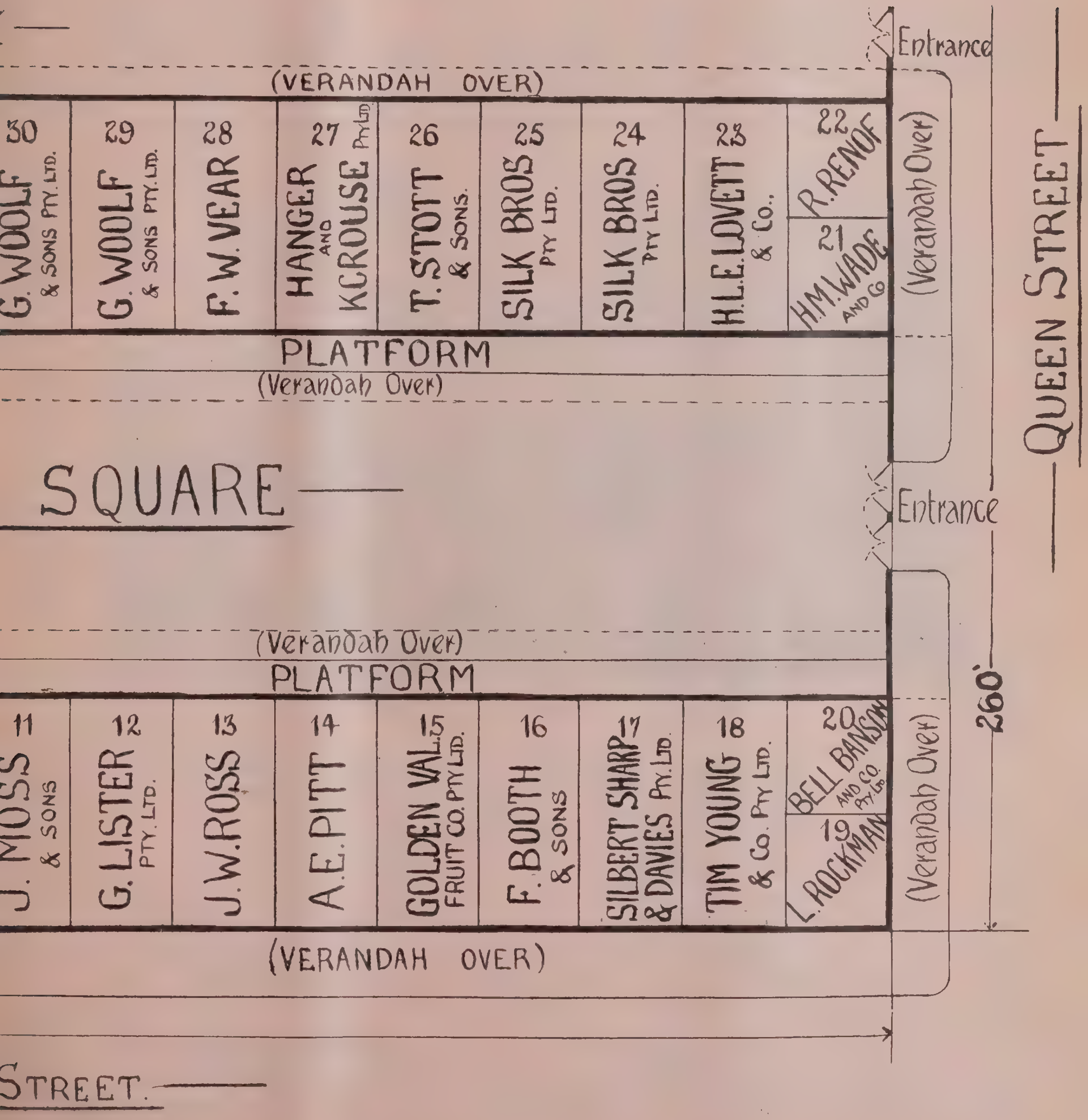
Plan showing layout and names of tenants

See page 519 for balance of stores wh


Entrance
28'0"
P
(VERANDAH OVER)
PEEL STREET
(Verandah Over)
40 F.A. CHINN AND Co.
39 SAM YICK
63'
38 WING YOUNG & Co.
37 R.A. WING & Co.,
36 P.A. PATRIKEOS
35 J.G. MUMFORD
34 MILLIS & SONS PTY. LTD.
33 W. SWEENEY PTY. LTD.
32 J.H. YOUNG & Co.
31 W.S. TONG
10'
PLATFORM
(Verandah Over)
MARK
Entrance
80'
(Verandah Over)
10'
PLATFORM
(Verandah Over)
2 A. PRICE
1 H. GRINBLAT
63'
3 D. SMITH PTY. LTD
27' 9"
4 H.L. PANG AND Co. LTD.
5 W.A. WATKINS
6 I.F. & M. Co.
7 P.D.S. LTD
8 J. DAVIS PTY. LTD.
9 F. CAVE & Co. PTY LTD.
10 H. WILSON
(VERANDAH OVER)
FRA

ntral portion of New Wholesale Fruit Market.

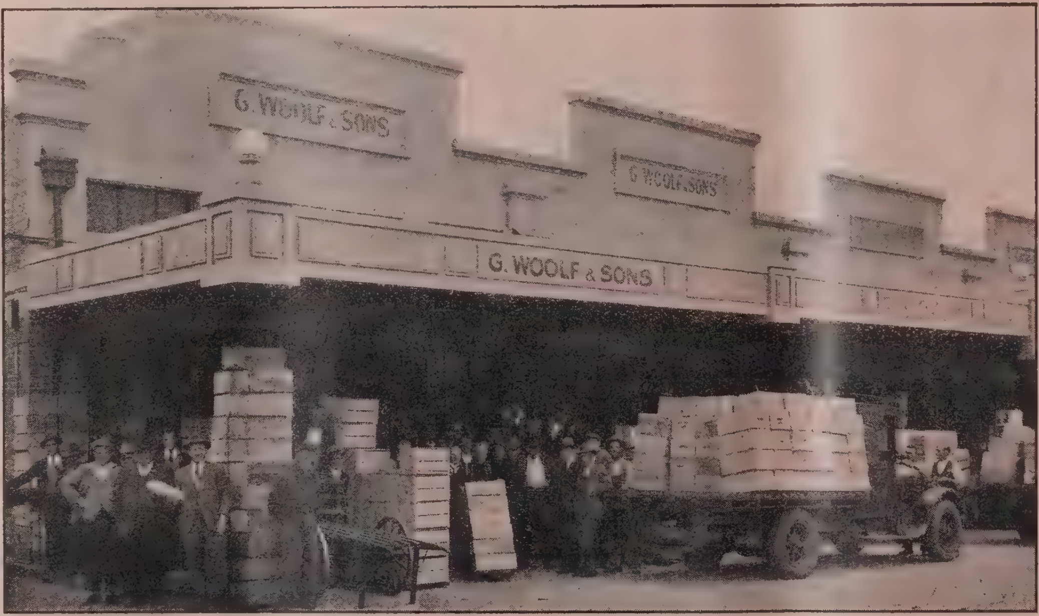
Peel Street and Queen Street respectively.


Entrance
(VERANDAH OVER)
30 G. WOOLF & SONS PTY. LTD.
29 G. WOOLF & SONS PTY. LTD.
28 F. W. VEAR
27 HANGER AND KCROUSE Pty Ltd
26 T. STOTT & SONS.
25 SILK BROS PTY LTD.
24 SILK BROS PTY LTD.
23 H.L.E. LOVETT & Co.,
22 R. RENOF
21 H.M. WADE AND Co
(Verandah Over)
QUEEN STREET
PLATFORM
(Verandah Over)
SQUARE
Entrance
(Verandah Over)
PLATFORM
11 J. MOSS & SONS
12 G. LISTER PTY. LTD.
13 J. W. ROSS
14 A. E. PITT
15 GOLDEN VALE FRUIT CO. PTY LTD.
16 F. BOOTH & SONS
17 SILBERT SHARP & DAVIES Pty. Ltd
18 TIM YOUNG & Co. PTY LTD.
20 BELL BANSON AND CO. PTY. LTD.
19 L. ROCKMAN
(Verandah Over)
260'
(VERANDAH OVER)
STREET.

Consign Your Fruit To

G. WOOLF and SONS

Wholesale Fruit Merchants and Growers' Agents



View of portion of our stores in the New Wholesale Market.

Nos. 29-30 WHOLESALE FRUIT MARKET, MELBOURNE

ALL CONSIGNMENTS RECEIVE PERSONAL SUPERVISION

POSTAL ADDRESS:
Box 692,
G.P.O., Melbourne.

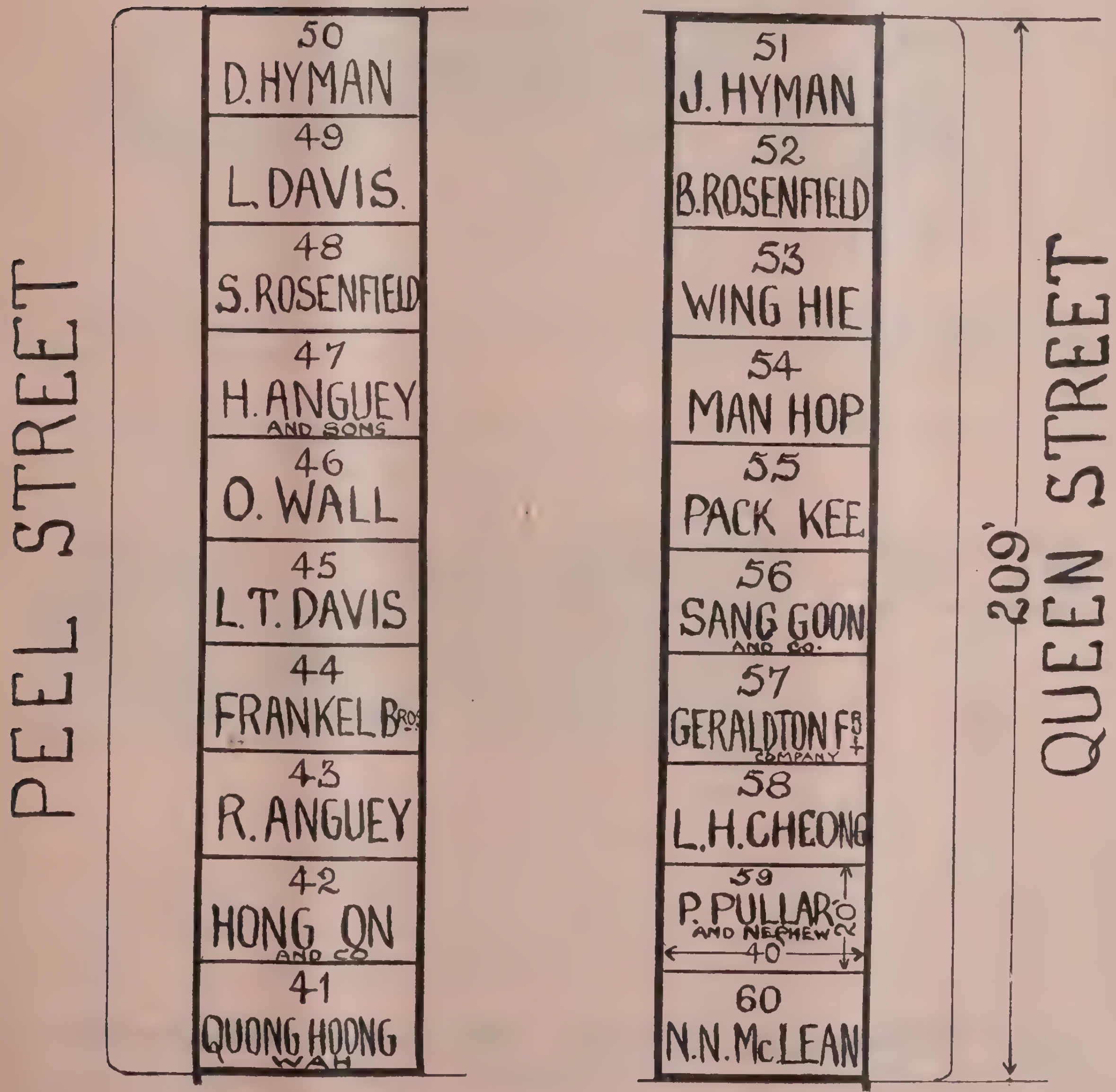
CABLE ADDRESS:
"Woolfson,"
Code: A.B.C.

TELEPHONES:
Store: F 5550.
Orchard: Pakenham E. 60.
Private: M 1339.

BANKERS:
National Bank of Australasia (Western Branch)

Another section of stores in New Wholesale Fruit Market. These stores have frontages to Peel Street and Queen Street respectively.

This plan in conjunction with plan on pages 516-17 shows complete lay-out of Market.


PEEL STREET
50 D. HYMAN
49 L. DAVIS.
48 S. ROSENFIELD
47 H. ANGUEY AND SONS
46 O. WALL
45 L. T. DAVIS
44 FRANKEL BROS
43 R. ANGUEY
42 HONG ON AND CO
41 QUONG HOONG WAH
51 J. HYMAN
52 B. ROSENFIELD
53 WING HIE
54 MAN HOP
55 PACK KEE
56 SANG GOON AND CO.
57 GERALDTON FRUIT COMPANY
58 L. H. CHEONG
59 P. PULLAR AND NEPHEW
20'
40'
60 N. N. McLEAN
209'
QUEEN STREET

FRUITGROWERS!

For Permanently Satisfactory Service
Consign to—

N.N.McLEAN
PROPRIETARY LIMITED

WHOLESALE FRUIT MERCHANTS
& EXPORTERS

CASES

CHEMICAL DUSTS

SUPPLIERS OF ALL ORCHARDISTS REQUISITES

Postal Address: **50 William St., Melbourne.** Registered Telegraphic Address: **"Fruitports," Melbourne.**

Cables and Telegrams—"OBLATE," Melbourne

F. W. VEAR PTY. LTD.

Fruit and Vegetable Salesmen
Commission Agents

Highest Market Rates Assured
Prompt Settlements

Apples and Pears Exported to United Kingdom and Continent

28 Wholesale Fruit Market, Melbourne
VICTORIA

Telephone: F 5311

Fruit Traders in New Wholesale Market.

Review of Activities.

J. Davis Pty. Ltd.—This is one of the oldest firms in the Melbourne wholesale fruit trade: they are located at store No. 8 in the new Wholesale Fruit Market. The business was established nearly 50 years ago by the late Mr. Joseph Davis—a man of considerable force of character, who was held in high esteem by growers and traders alike.

The firm established a sound reputation, winning the confidence of growers and buyers. A big trade was worked up with country and interestate buyers, and the firm also developed a satisfactory export trade to New Zealand, especially with Oranges.

The citrus trade has always been a big feature in J. Davis' business, the firm having a large body of appreciative grower-consignors in the Mildura and other districts.

The business is now efficiently administered by Mr. H. J. Davis—a son of the founder—and with him is associated Mr. R. F. Aldridge.

Mr. H. J. Davis has held the position of President of the Wholesale Fruit Merchants' Association of Victoria and has taken a keen and practical interest in all matters which tend for the betterment of the trade and the industry generally.

At one time the firm handled 70 per cent. of the Fiji Banana trade in Victoria, and when this fruit was driven off the Australian market by high duties, Millis & Sons turned their attention to Queensland in a big way. The company has large areas under cultivation, and Mr. Thomas Millis, the present head of A. Millis & Sons, knows the Banana trade from every angle. He has made it a practice to keep in personal touch with growers of fruit in all parts of Australia, and his knowledge of the fruit trade generally has earned him the respect of growers and buyers alike. His brother, A. J., died 13 years ago, while Alfred Millis, senior, died as recently as 1928.

A. Millis & Sons was formed into a company about ten years ago, and is composed of members of the family, with the popular "Tom" at the helm. In 1920 the latter had a tour abroad, and gained a knowledge of fruit marketing in other parts of the world. During his tour he saw many kinds of fruit, but is convinced that Australia more than holds its own in the class of fruit it produces and sends overseas.

Five years ago the company built large stores in Queen-street, near the site of the new market, and the bulk of the business has been done there since. Evidently A. Millis & Sons anticipated the trend of coming events.

Another interior view of New Melbourne Wholesale Fruit Market.

A. Millis & Sons, at No. 34 Store, is a very old-established firm. It is nearly fifty years ago since Alfred Millis, senior, bought out Mr. W. H. Ikin's business in the Western Market. Mr. Millis established a big connection in Victoria, New South Wales and Queensland among the growers, and later took his two sons, A. J. and T. E., into the business. Fruit was disposed of in Victoria Market and South Melbourne Market, as well as the Western Market, and the Millis family often started the day's work at 2 a.m. When the Goulburn Valley orchards began to send large quantities of fruit down to Melbourne 35 years ago Millis & Sons were well in the field, and carried the bulk of this fruit for many years.

W. S. Tong, at No. 31 store, is the oldest established firm of fruit merchants trading in Melbourne, for the business was pioneered as far back as 1853 by W. S. Tong in the old Western Market, where he was one of the first tenants. It was there he carried on for 41 years. One of his employees was Willian Young, who for nearly 30 years was in constant touch with the business. In 1894, just prior to the death of Mr. Tong, the business was taken over by Mr. Young, who carried on in the old name of W. S. Tong until August 4, 1914. The date that will go down in history as the commencement of the world war, was also the date of Mr. William Young's death. His son, Alfred, then took charge of the business and he has remained at the head of affairs ever since.

Telephone F 4321

TIM YOUNG & CO.
Pty. Ltd.

Wholesale Fruit Merchants
. . And Growers Agents . .

Store 18, Wholesale Fruit Market
Melbourne

Consignments Solicited from Growers who can be assured of Receiving the Very Best Service and Prompt Returns

Cable Address:
"TIYOUNG"
A.B.C. Code, 5th Edition

Consignment
Number
49

Postal Address:
Box 28a
G.P.O. Melbourne

Stencils and Labels Supplied on Application

Banana Stores

247-9 Franklin Street [Opposite Wholesale Fruit Market]

Bankers:
E. S. & A. BANK - SWANSTON STREET, MELBOURNE

Alfred Young has had a good grounding of the wholesale fruit trade, for he has been reared in the business, and the trade name of W. S. Tong still flourishes.

The increased production and consumption of fruit has added considerably to the amount of business done by Mr. Young during recent years, and besides doing a large interstate trade, shipments are being made to England, Germany, Java, New Zealand and the Pacific Islands.

Mr. Young has noticed marked improvement in the way growers are sending their fruit to the wholesale market and hopes they will continue with the good work. There is still room for improvement, however, with some growers.

Silk Bros. Pty. Ltd., of Melbourne, are now situated at Stores 24 and 25 in the new wholesale fruit markets. The progress made by this company in the last fifteen years is noteworthy. They commenced in the wholesale trade at Victoria Market and 441-45 Flinders-lane, dealing in fruit and vegetables. About eight years ago they also acquired stores in the Western Market, and decided to make a bid for the Queensland banana trade. The business developed satisfactorily, and banana ripening rooms were erected at 441-5 Flinders-lane, with gas heating apparatus. After a time the firm decided that electrically heated rooms would be more efficient, and an up-to-date electrical plant was installed at considerable cost. This has proved so successful, that now Silk Bros. have a very substantial trade, and are in receipt of many appreciative letters from growers.

Shortly after commencing in Melbourne, they established themselves in Sydney, and later in Adelaide and Brisbane. They claim to be among the largest wholesale fruit merchants in Australasia, and their success is attributed to the fact that the whole organisation is under the personal supervision of Messrs. A. H. and I. Silk. It is the intention of Silk Bros. Pty. Ltd. to further enlarge their ripening department by installing further ripening apparatus, also refrigerating plant, so that the bananas will always be at the one temperature. They consider that their ripening plant will be the most up-to-date in the southern hemisphere.

A further progressive method for conveying fruit will be the installation of electric elevators, which will take fruit direct from trucks to ripening rooms, and later to customers' waggons. Silk Bros. Pty. Ltd. invite correspondence from growers regarding picking, packing and grading fruit.

* * * * *

Tim Young & Co. Pty. Ltd., who occupy No. 18 store, near the Queen-street entrance, is a well-known firm of fruit merchants that was originated by Messrs. Tim and Percy Young in 1890. Both the brothers have passed away, but the name still lives in the fruit trade, although for a time it was known as Tim Young, Twyford and Sing War, after an amalgamation in 1908. The present company was formed three years ago with Mr. Fong as managing director.

The operations of the firm are principally confined to Victoria, South Australia and N.S.W., and an extensive trade is done in Bananas, Pineapples and other tropical fruit from Queensland; representatives of Tim Young & Co. are in constant touch with growers in those States, and a large business is done with citrus fruits, and last year the firm disposed of 125,000 cases of Oranges from members of the Federal Citrus Council of Australia. A large quantity was also passed through the firm from non-association members.

Mr. Fong thinks the change over from the old Western Market a good move, and is fully alive to the possibilities of increased business as a result. The firm will use their store in Franklin-street, opposite the market, for the ripening of Bananas, thus allowing more space for their business at headquarters, where fine offices have been erected over the ground floor space.

During the many years of this firm's establishment, a satisfactory connection has been built up with a good class of buyers, thus enabling the fruit sent forward by growers to be promptly disposed of at best prices.

Mr. Fong attended the recent Citrus Growers' Convention at Mildura, and he was able, in his contact with the growers, to give valued information regarding market requirements.

MELBOURNE has a Population of over a Million. This constitutes a big Market for Fruit and Vegetables.

The Trade is handled on progressive lines.

G. Woolf & Sons, who have two stores, Nos. 29-30, was established at the Western Market 30 years ago, by Mr. Godfrey Woolf. The latter's two sons, Messrs. Nathan and Isaac Woolf, were afterwards taken into partnership, and when Mr. Godfrey Woolf retired in 1912, the brothers carried on.

The growth of the business since that time is one of the romances of the fruit industry. Steady progress each year has marked the history of G. Woolf & Sons from the commencement, and to-day they have one of the largest businesses of its kind in Australia.

Fruit is forwarded to all States of the Commonwealth, and in addition the firm has established a large export business, and fruit is shipped to various world markets. The firm have their own orchard at Pakenham where 200 acres are planted with export varieties of Apples.

The reinforced concrete cool stores built on the property accommodates 25,000 cases at the present time, but this will later be increased to 80,000 cases capacity.

They have a band of energetic helpers at the wholesale market, and among them is Mr. Thomas Huxtable, who has been with the firm for 20 years. He was taken into the business in 1927.

In the new wholesale fruit market, Messrs. G. Woolf & Sons have an ideal position with ample space to handle large quantities of all classes of fruit. The improved facilities will place the firm in a position to give even better service than they have done in the past.

Frank Booth & Sons

Wholesale Fruit Merchants and Growers' Agents
Importers and Exporters

No. 16 Wholesale Fruit Market, Franklin Street, Melbourne

Accredited Selling Representative for the V.C.C.A., Murray Citrus Association and the N.S.W. C.C.A.

Consignments of all classes of fruit and vegetables are solicited from all parts. All consignments receive personal attention of the Principals, and returns are made promptly.

Address All Correspondence:
Box 4065, G.P.O., Melbourne.

Telephone: F3933.
Bankers: Bank of Australasia.

Telephone: Central 23

H. LOUEY PANG & CO.
PTY. LTD.

Fruit Produce and Commission Agents

No. 4, Wholesale Fruit Market, Melbourne
and 172 Little Bourke Street

Send Your Fruit to Us—Good Prices Assured
Cheques Sent Daily, Immediately Consignment is Sold.

Telegraphic Address—
"PANGANCO"
Melbourne

Bankers—
E.S. & A. BANK
Swanston Street
Melbourne

Postal Address—
BOX 795F
G.P.O., Melbourne

F. Booth & Sons.—The principal of this firm, Mr. Frank Booth, has had 40 years' experience in the fruit trade. He originally commenced business with the Australian Wine & Fruit Agency Company, who carried on business at the corner of King and Collins streets. At this time all fruit was sold by auction.

The firm has been carrying on business in the Western Market for 18 years, and the rapid growth of their business has been somewhat hampered by the lack of space available. In their stand at No. 16 in the new wholesale fruit market, with a frontage to Franklin-street and the market square, they will have ample space for expansion of their business.

Mr. Booth's two sons are associated with him in the business, Mr. George Booth having been with him for 15 years. His other son, Mr. J. Booth, joined up with him on his return from the Great War, where he was five years on active service.

The firm are accredited selling representatives for the V.C.C.A., the Murray Citrus Association and the N.S.W. C.C.A. Their business, however, is not confined to the handling of citrus fruits, as they also handle large quantities of apples, pears, tomatoes, cherries and other fruits when in season.

Mr. Booth was one of the first firms to receive citrus fruits from Parramatta, N.S.W. He is greatly impressed with the general improvement of the packing and appearance of most of the fruit that is now being sent to the Victorian market.

Mr. Booth, senior, is well known and respected by both growers and buyers, and his genial manner has earned for him many friends in the trade. His sons are carrying on the business on similar lines to those employed by himself, and their advice and experience is always at the service of growers.

* * *

Geo. Lister Pty. Ltd., at No. 12 Store, is a very old-established firm, for it was founded fifty years ago by Mr. George Lister in the Western Market in conjunction with Mr. White.

When Mr. Lister retired 25 years ago, the firm was carried on by Messrs. J. M. Jacobs & Bellmaine, under the old title of Geo. Lister. Mr. Bellmaine disposed of his interests to Mr. I. Langley, who remained in the firm for 16 years, eventually selling out his interests to Mr. Jacobs. who conducted the business for several years on his own account, finally turning it into a proprietary company. Mr. J. R. Vail became managing director of the new company, with Mr. Jacobs also a director, and retaining his interests.

Mr. Vail, who served with the A.I.F., is a son of Mr. John Vail, Government Printer, Hobart. At the termination of hostilities he joined the staff of Messrs. S. Larkinson & Co., fruit brokers, of Covent Garden, London, and remained with them for 6½ years. Eventually he returned to Australia and joined forces with Geo. Lister Pty. Ltd. He is a popular young man, who has won a large circle of friends both inside and outside the wholesale fruit trade.

I. F. M. Co.

We Build on Goodwill!

For Service and Safe Returns
Entrust Your Business to—

INTERNATIONAL FRUIT & MERCANTILE CO.
(A. S. M. Harrison & Cecil Snider)
No 6, Wholesale Fruit Market, Melbourne

Bankers:
E. S. & A. Bank
Melbourne and
Adelaide

Accredited By:—
V.C.C.A.
Murray Citrus Growers Co-op Assn.
Tasmanian Fruit Advisory Board
Victorian Fruit Marketing Assn., etc.

Telephone:
F 1368

Telegrams;
IFMCO

The Leading Apple Buyers and Exporters in the State

Experience Counts . .

Good intentions won't make up for lack of knowledge

Established Nearly 50 Years

T. Stott & Sons

26 Wholesale Fruit Market
MELBOURNE
And at Victoria Market

Shipping No.
41

Established 1882 Telephone F 4370

Telegraphic Address: "Stottsons, Melbourne"

PROMPT SETTLEMENT

Country and Interstate Order Trade Supplied

Stencils or Labels sent on Application

Bankers:
Bank of Australasia, Collins St., Melbourne

Send Your Fruit to

J. W. ROSS

Fruit and Vegetable Commission Agent

No. 13
New Wholesale Fruit Market, Melbourne

We Always Give Satisfaction

Stencil—J.W.R.
38
MELB.

Bankers:
E.S. & A. Bank, Melbourne.

Telephone:
F 2426.

Silbert, Sharp & Davies
Pty. Ltd.

(G. C. Davies, Managing-Director)

No. 17, New Wholesale Fruit Market, Melbourne, Vic.

We have a large country and interstate connection.

To supply this trade we are buyers of Choice, Well-graded Selected Fruits.

Telephone—
F 2287

Telegraphic Address—
"Silbsharp"

Prior to coming to Australia, Mr. Jacobs was connected with Messrs. Garcia, Jacobs & D. D. Pankhurst, well known London fruit brokers, and had a good knowledge of the fruit trade when he joined up with George Lister. Mr. Jacobs was the first President of the Wholesale Fruit Merchants' Association of Victoria, and it was at his instigation that the citrus growers of Victoria and South Australia united into the co-operative movement now known as the V.C.C.A.

He was also active in bringing the Merbein Ohanez growers together and founding their Association. He has seen many changes in the trade and has watched the horse-drawn vehicle give way to motor transport. He has seen the old identities pass out of the market one by one, some to prosperous retirement and some to their last resting place. He has lived long enough to see and take part in the removal from Western Market to the new wholesale market, and the change over has its regrets, as well as appreciation for the march of progress.

The firm are large shippers of fruit to the United Kingdom and Continental houses, and this side of the firm's activities is ever increasing.

* * * * *

Wm. Sweeney Pty. Ltd., whose store is situated at No. 33 in the new wholesale fruit market, with frontages to the market square and the quadrangle, is one of the oldest firms in the fruit trade. Since 1893 they have been established in the Western Market, and during this period have concentrated their efforts on handling all classes of fruit. They have a large connection amongst buyers in the city and suburbs, also in the country.

Mr. Sweeney has confined his efforts to securing quality fruit well packed, with the result that buyers come to him regularly for certain lines which are a guarantee of quality. He believes that many advantages will be gained by both growers and buyers now that the whole of the fruit selling business is concentrated in the new fruit market.

Growers who have not previously forwarded consignments to Wm. Sweeney Pty. Ltd. are requested to forward a trial consignment which will have personal attention. Advices are sent to growers daily and cheques weekly. Enquiries are invited from growers on marketing matters. Correspondence should be addressed to Box 456, G.P.O., Melbourne.

* * * * *

H. M. Wade & Co. will be found at No. 21 store, facing Queen-street. Mr. Wade who is President of the Wholesale Fruit Merchants' Association of Victoria, has been connected with the fruit trade all his life, and before he was established in the wholesale trade was manager of canneries and buyer for factories. His extensive knowledge of the marketing end of the fruit trade has been a big factor in the success of H. M. Wade & Co., and in safeguarding the interests of the Association of which he is President.

* * * * *

I.F.M. CO. (International Fruit and Mercantile Company) at No. 6 store, is carried on by Messrs. Cecil Snider and A. S. M. Harrison, in partnership, and was established 14 years ago. This company is probably the largest buyer of Apples in the State, and are also exporters of Apples on a large scale.

They have organised, financed, and erected Apple-packing houses in six districts with the object of improving the export pack for overseas markets, and their efforts in this direction have done much to create a demand for Australian fruit abroad.

They are in direct touch with buyers and operators in Europe, Dutch East Indies, and Canada, and every movement of these markets is known to the I.F.M. Co.

Apples are not the only fruit handled by the company, all fruits are dealt with and the company hold a leading position in the local trade as well as the export trade.

The company is accredited representative for the V.C.C.A. Tasmanian Advisory Board, South Australian Tomato Growers' Association, Barham and Koondrook Association, and have a clientele distributed throughout the Commonwealth.

Besides the store at the wholesale fruit market, the company have bulk stores in Peel-street, close to their main premises.

* * * * *

F. W. Vear Pty. Ltd.—This company's store in the new Wholesale Fruit Market, is No. 28. The principle of the firm is Mr. Fred W. Vear, who for a great number of years has been connected with the growing, exporting and handling of fruit and produce. His orchard was originally at Burwood, but with larger opportunities he became actively associated with the big Graceburn Valley Orchard and cool store at Healesville. Associated with him in the fruit business are Mr. W. McGowan and Mr. M. H. Dykes. The business having steadily developed the change to larger premises was welcomed. An excellent position was secured in the new market, which enables the company to deal with their growing trade, and every effort is made to deal promptly and satisfactorily with all business entrusted to him. All classes of fruit and produce are handled. The shipping number for interstate fruit is No. 44.

Consignments of All Fruits Invited by

H. L. E. Lovett
and Co.
Fruit Merchants

No. 23, Wholesale Fruit Market
Melbourne

Prompt Returns—Cheques Posted Daily.

Cable Address:
"Bergamet."

Code: A.B.C.,
4th & 5th Edition.

Telephones:
Store: F 2256.

After Hours:
M 1449,
Haw. 4883.

Bankers:
E.S. & A. Bank, Collins St., Melb.
(Royal Branch).

ALFRED MILLIS & SONS
PTY. LTD.

Wholesale Fruit Merchants, Importers and Exporters

No. 34,
NEW WHOLESALE FRUIT MARKET

Head Office: 438 Queen Street

Bulk Stores and Banana Ripening Rooms: 438 QUEEN STREET

Telegraphic Address:
MILLIS MELB.
Postal Address:
BOX 41, G.P.O.,
Melbourne.

Bankers:
UNION BANK,
Collins Street,
Melbourne.

Telephone:
F 1862.

Hanger and Krcrouse Pty. Ltd.

Fruit Merchants - - Growers' Agents and Commission Agents

No. 27 New Wholesale Fruit Market
Melbourne.

Also 1 and 2 Vegetable Section

CONSIGNMENTS SOLICITED FROM GROWERS.
HIGHEST MARKET PRICES ASSURED—PROMPT SETTLEMENTS.

Bankers:
NATIONAL BANK,
Stock Exchange Branch,
Melbourne.

Telephones:
Market—F 1797.
After Hours:
Mr Krcrouse—Windsor 8332.
Mr. Hanger—W 2775.

Hanger & Krcrouse Pty. Ltd., at No. 27 Store, are one of the largest distributors of Peas and Beans, as well as having a good share of the fruit trade. Originally, Mr Hanger opened up at the Victoria Markets, after having had 30 years' experience of the wholesale fruit and vegetable trade with leading merchants. He did so well at the Victoria Markets that he later came into competition with the wholesalers at the Western Market, where he was joined by Mr. Krcrouse. The business was turned into a proprietary company, as the volume of business increased, and when the change over took place to the new Wholesale Fruit Market, the firm were doing a big business. Since they have been at the new market, business has further increased, and, being in such a good position, they are expectant of further improvement. The firm, owing to the amount of business done with garden produce, have an extra position at the vegetable section of the market.

* * * * *

Herbert Wilson will be found at No. 10 store. Mr. Wilson places his specialised knowledge at the service of the fruitgrower. With a lifetime experience in fruit distribution, he is looking forward to a big increase in business following the opening of the new wholesale market. It will provide a new avenue for trade distribution in which his special knowledge will have adequate scope.

Growers visiting Melbourne are invited to call and see Mr. Wilson personally at the new market. Correspondence is welcomed from growers unable to call. Mr. Wilson is an accredited agent for the Victorian Citrus Association, and growers are notified that the business entrusted to him will receive his personal attention.

* * * * *

H. L. E. Lovett & Co., at No. 23 store, is one of the old-established firms in the fruit trade. The head of the firm—Mr. H. L. E. Lovett—started life as a law clerk, having been articled to the late Sir Archibald Michie, but the life did not appeal to him, and he later turned to the fruit trade at the Western Market, where he commenced business in 1898. About two years later he joined the firm of McClure, Valentine & Co., who were at that time the leading firm of fruit auctioneers in Melbourne.

He next started operations at 47 William-street, selling fruit under the hammer, where he remained for eight years. Then he crossed the road to the Western Market, where for years he carried on successfully as a merchant. When the Fiji trade was in full swing, Lovett & Co. was one of the leading firms handling the island fruit business. At the termination of the Fiji trade, the firm turned its attention to Queensland, and is now well established in the northern State. The firm have a favorable position at the new wholesale market, close to the Queen-street entrance, a position that commands trade from all angles.

* * * * *

N. N. McLean Pty. Ltd. are at No. 60 Store, facing Queen-street, and they have found the change over from the Western Market beneficial, for their business has shown a big increase during the short time the new market has been in operation. Mr. McLean had a lengthy experience of the grower's end of the fruit trade before entering business in the wholesale trade. For many years he represented the P.D.S. at Leeton, N.S.W., and while there gained a particularly good insight into the growing of citrus fruits. The P.D.S. at that time handled most of the products of the Murrumbidgee irrigation area.

Mr. McLean was in the Western Market for eight years, and five years ago launched out on his own account. Mr. Percy Webberley joined up with him, after 30 years' experience in the trade, and this expert salesman personally supervises all the firm's sales of fresh fruit.

N. N. McLean were big exporters of Apples to Europe

Send Your
Fruit and Nuts
To . . .
R. RENOF
FRESH AND DRIED FRUITS
MERCHANT
AND GROWERS' AGENT,
No. 22, Queen Victoria Wholesale
Fruit Market, Queen Street,
Melbourne, C.1.
Prompt Advice - - - Prompt Returns
Bankers:
E.S. & A. Bank, Collins St., Melbourne.
Cable Address—
"Robrenof,"
Melbourne.
A.B.C. Code.
Telephones:
Store: F 1540
After Hours:
L 5754

Consign Fruit and Vegetables
to
H. M. WADE & CO.
Fruit Commission
Agents
No. 21 WHOLESALE FRUIT
MARKET, MELBOURNE
Shipping 45 Number

J. G. Mumford

(REGISTERED)
ESTABLISHED 25 YEARS

Fresh Fruit Merchant
and Commission Agent

Salesroom
**35, Wholesale Fruit Market,
Melbourne**

REGISTERED OFFICES
449-451 FLINDERS LANE
(COOL STORES OPPOSITE)
MELBOURNE, VICTORIA

Account Sales Posted Daily :: Satisfied Growers in All States :: Shipping Number 31

References: Commercial Bank of Australasia Ltd.

APPLE EXPORTER

Highest Advances Made Against Shipments

Representing Leading Fruit Firms in all Main English and Continental Ports.

Cable Address: "MUMBOURNE," Melbourne

P. A. Patrikeos

**Fruit and Vegetable
Commission Agent.**

**No. 36, New Wholesale Fruit
Market, Melbourne**

CONSIGNMENTS OF FRUIT & VEGETABLES SOLICITED FROM GROWERS.

HIGHEST MARKET RATES ASSURED.

PROMPT SETTLEMENTS.

Bankers:
E.S. & A. Bank, William Street, Melbourne

Telephone: F 2227.

Growers—We Want Your Business

W. S. TONG

Fruit Merchants

**No. 31, Wholesale Fruit Market,
Melbourne**

The Oldest Established Firm in the Fruit Trade—Established 1853

**Postal Address: Box 579,
G.P.O., Melbourne.
Telegraphic Address:
"TONG," Melbourne.**

**Bankers:
Union Bank,
Collins Street,
Melbourne.**

**Telephones: Store— F 5923.
Private—
Mr. A. Young: Haw. 3155.
Mr. C. Young: M 4253.**

last season, and anticipate further expansion in this direction.

They are distributors in Victoria for Messrs. Gibbs, Bright & Co.'s chemical dusts and orchard requisites.

Silbert, Sharp & Davies Pty. Ltd.—This company, which will be located at stand No. 17, in the new wholesale fruit market, has been connected with the fruit trade for many years. The name of Silbert & Sharp is connected with the fruit in three States—Perth, Adelaide, Melbourne. The original business from which the other States have graduated was established in Perth, W.A., when gold mining was at its zenith, and in addition to the wholesale business retail stores were established wherever gold mining townships sprang up.

The Melbourne branch was commenced some 26 years ago, eventually, Messrs. Silbert & Sharps' interest was acquired by Mr. J. Davies, who carried on the business until his death in 1918. The management of the business was then taken over by the present Mr. Geo. C. Davies, who concentrated on the furtherance of the firm's large country and interstate order. The firm have an excellent connection and are always buyers of choice well-graded and selected fruits, which their specialised class of business requires.

A branch of the business is carried on in Launceston, Tasmania, under the name of A. H. Blundell & Co.

Soft Fruit Shipments.—Large quantities of Peaches, Apricots, Grapes, Cherries, ripe Bananas, Tomatoes are shipped to Launceston in season. Owing to the rough and numerous handling to which these fruits were subjected, Mr. Davies found the trade slipping away, so he determined to find some method of protecting the fruit. The result was the invention of a new means of transport. The firm built a chassis which is carried on four rubber tyred ball-bearing wheels. Springs were placed at each side of the chassis, which meant that the cases of fruit rest upon a bed of springs. Each side of the chassis is built up to a height of four feet by means of a number of steel posts. Each truck holds 32 bushel cases of fruit and is hoisted from the firm's lorry straight on to the deck of the boat and taken off at the other end in the same manner, thus saving the numerous dumping which cases of fruit are subject when handled singly in the usual way. Mr. Davies contends that fruit should be handled like eggs. Fruit is jarred as the result of dropping the cases into trucks, on to lorries, etc., and as the fruit ripens the bruises also develop. No one would dream of dropping a case of eggs, why should fruit not be handled in the same way.

Bell, Banson Pty. Ltd.

Wholesale Fruit & Vegetable Merchants,
Commission and Shipping Agents,
Importers & Exporters.

CONSIGNMENTS OF ALL CLASSES OF FRUIT AND VEGETABLES SOLICITED FROM GROWERS IN ALL STATES.

Best Prices Secured.

Prompt Advice and Settlement.

Telephone: F 1023; after hours JW 2528.

Bankers: E.S. & A. Bank, Collins St., Melb.

No. 20 New Wholesale Fruit Market, Melbourne

Mr. Davies is to be congratulated on his enterprise and the development of the soft fruit market with Tasmania.

* * * * *

Robert Renof, who occupies No. 22 store, facing Queen-street, had a lengthy experience of the fruit trade in South Australia before he opened business at the Western Market seven years ago. Mr. Renof, who specialises in dried fruits direct from the growers, has travelled extensively, and is in a unique position regarding foreign markets. Although he is not exporting at present owing to low prices abroad, he disposes of 200 tons of Australian-grown dried fruits annually, and is in a position to export immediately prices improve. Large quantities of fresh fruit are also handled by him, and as he has one of the best positions at the new wholesale market he is confident of a large increase in future business in this direction.

* * * * *

T. Stott & Sons will be found at No. 26 store, at the new wholesale fruit market. The firm is one of the oldest and most respected of Melbourne's wholesale fruit merchants, being established in 1882 by the late Mr. Thomas Stott. For nearly half a century the firm had been established at the Western Market, and during this long period have established a big connection with growers and buyers in all parts of the Commonwealth. The business, which is now carried on by three sons, has been built up by methods that have proved satisfactory and reliable. Throughout the trade this confidence has been a big factor in the steady growth of the firm's business.

Growers doing business with T. Stott & Sons can rest assured that all fruit forwarded to them for sale will receive the personal attention of the principals. Advices and returns are sent to growers promptly.

* * * * *

The **Golden Valley Fruit Co.,** who occupy No. 15 store, is one of the newer firms from the Western Market. The company was established in 1922, but one of the directors had a long experience of the fruit trade prior to the formation of the company. Business in the early days of the company was confined to Bananas, but soon every class of fruit was handled with considerable success. A large country order trade has been established and has proved a great asset in the disposal of the produce of growers. Personal attention to all sales, and keen business acumen, has placed this firm on a solid footing with the fruitgrower.

Telephone: F 6426. Private—L 2038. (Established 1865)

J. MOSS & SONS

Fruit Merchants .·. Commission Agents

No. 11

New Wholesale Fruit Market, Melb.

Also at City Markets, Sydney

CONSIGNMENTS SOLICITED FROM GROWERS IN ALL STATES.

BEST PRICES SECURED. PROMPT SETTLEMENT.

Bankers:
Bank of New South Wales, Melbourne
E.S. & A. Bank, Sydney.

NOTHING SUCCEEDS LIKE SUCCESS

Growers!

Recommend Others to
Send their Products to

Arthur Price

**Fresh and Dried Fruit
Commission Agent**

No. 2
New Wholesale Fruit Market
MELBOURNE

Bankers:
BANK OF AUSTRALASIA
(Elizabeth Street Branch).

Telephones: F 4938; After Hours L 3454

P.D.S. CO-OPERATION P.D.S.

is the Secret of

Successful Marketing

Secure Top Market Prices by
Consigning your Citrus to

**Producers' Co-Operative Distributing
Society Ltd.**

No. 7, Wholesale Fruit Market, Melbourne

Australian Agents
"CUTLER FRUIT GRADER"

BRAND
YOUR CASES
THUS ☞
Stencils and Advice
Cards Supplied on
Application

V.C.C.A.
P.D.S.
Melb.

Telegraphic Address
"PRODISCO"
Melbourne

Postal Address
BOX 4013 G.P.O.
Melbourne

Telephone: F 1987; after hours Haw. 5026

J. McNamara, Manager, late A.I.F.

David Smith Pty. Ltd. will be found at No. 3 Store. This firm of fruit and produce merchants is a very old established one.

The business was originally started by Wm. Charlick in Viaduct Buildings, Flinders-street, and taken over by the original David Smith in 1885, who built up a large connection as Banana ripener and country and interstate distributor of fruits, vegetables and produce of all descriptions.

Owing to increased volume of business, especially Banana ripening, larger premises at 476-482 Flinders-lane were acquired in 1905. The principals at this time were Mr. David Smith, Mr. David P. Smith, and Mr. Tom Smith.

On the death of Mr. David Smith in 1908 and Mr. Tom Smith, the business was taken over by Mr. David P. Smith, who continued as proprietor until 1920, when he retired and the business was taken over by his sons, F. W. and H. S. B. Smith, with an employee, C. A. Baldock, forming the company of Smith & Baldock Pty. Ltd.

On the retirement of Mr. Baldock in 1923 the old name of David Smith Pty. Ltd. was reverted to.

Mr. F. W. Smith disposed of his interests in the firm in 1929, and the management is now in the hands of Mr. W. E. Headdey, a son-in-law of the late Mr. D. P. Smith, who became a member of the company in 1926.

The older members of the staff have been with the present proprietary for over a quarter of the century, and it is interesting to note that amongst the staff are a grandson and two great-grandsons of the original David Smith.

As it is impossible for the company to concentrate their business in the small space made available at the new wholesale Fruit Market, the old premises at 476-482 Flinders-lane are being retained as Banana ripening rooms, bulk stores and vegetable despatch.

GOLDEN VALLEY FRUIT
CO. PTY. LTD.,
FRUIT, BANANA & VEGETABLE MERCHANTS,

Stand No. 15

Wholesale Fruit Market
Melbourne

YOUR FIRST CONSIGNMENT WILL BE THE BEGINNING OF MANY

Stencils and Advice Notes on Application

Postal Address: Box 439 G.P.O.

Bankers—
E.S. & A. Bank,
King Street,
W. Melbourne

Telephones—
F 3445
After Hours: X5839

* * * * *

Dan Wuille-Mumford.—The attention of readers is directed to the advertisement on page 9 of this issue, inserted by Messrs. Dan Wuille & Co. Ltd., Covent Garden, London, fruit mercants, in conjunction with J. G. Mumford, registered commission agent, merchant, and exporter, 35 Wholesale Fruit Markets and 449-451 Flinders-lane, Melbourne.

It is of interest to note that a fruitgrower was instrumental in bringing these firms together. This grower, who regularly shipped through J. G. Mumford, visited England two years ago, and was so impressed with the standing and organisation of Dan Wuille & Co. Ltd., that on his recommendation Messrs. J. G. Mumford accepted their representation. The business transacted has been satisfactory, and copies of account sales are available for the inspection of all growers interested. The firm of Dan Wuille & Co. Ltd. is sound and well established, having offices and branches at London, Liverpool, Glasgow, Manchester, Hull, Cardiff, Newcastle-on-Tyne, Bristol, Birmingham, and Leeds.

It has been decided to institute a competition for the "Dan Wuille-Mumford Cup." For the first year the cup will be competed for at the Red Hill (Vic.) Show, and in subsequent years at other leading country shows. The entry will be one case export Apples of the main bearing variety peculiar to the district in which the show is held for that year. A handsome silver cup will be presented to the successful competitor.

The firm of J. G. Mumford was established for just on a quarter of a century: the principals are in active touch with the fruit trade, and receive supplies from every State of the Commonwealth. Enquiries are invited, and for reference the Commercial Bank of Australia is mentioned.

* * * * *

J. H. Young & Co. Pty. Ltd., who occupy a prominent position at No. 32 Store, is one of the best known firms of fruit merchants from the Western Market. Established 21 years ago by the late Mr. J. H. Young, who was formerly a fruitgrower at Tyabb (Vic.). The firm was placed on a firm footing with growers from the outset owing to Mr. Young's intimate knowledge of the growers' end of the business. In 1922 Mr. R. Gordon became a partner, and on the death of Mr. Young in 1926 took control of the firm's destinies and has been the managing director ever since. Mr. Gordon has proved a popular manager, and the firm's business has been expanding to such an extent under his guidance that it was a welcome turn of events when the building of new markets was suggested. The extra accommodation will enable the firm to still further extend its activities on behalf of the growers. An efficient office staff and good salesmanship have been big factors in the placing of this firm in the sound position that it is in to-day.

Cables & Telegrams:
"WINGYOUNG," MELBOURNE.
P.O. Box 1509N. Phones: C 3299, F 3252
Private: F 5576 (after hours)

WING YOUNG & CO.

Banana and Fruit Merchants and Commission Agents

145-7 Little Bourke Street, and Store No 38, Wholesale Fruit Market, Melbourne

Prompt A c Sales and Cheques.

SHIPPING W.Y.& CO. 50 MELB. BRAND

Stencils & Advice Notes Free on Application
References: E.S. & A. Bank, Melb., Adelaide & All Queensland Branches.

L. Davis & Son

Fruit Merchants & Salesmen

No. 49, New Wholesale Fruit Market, Melbourne

CONSIGNMENTS OF FRUIT SOLICITED FROM GROWERS THROUGHOUT AUSTRALIA.

Highest Market Prices Assured.
Prompt Settlement.

Bankers:
National Bank, Melbourne.

Telephone:
F 8155.

You too Can Get

Higher Prices—Bigger Profits

Let Us Help You To Greater Prosperity

CITRUS - TOMATOES - CUCUMBERS
BANANAS - PINEAPPLES - BEANS
PEAS, ETC.

We guarantee a square deal and prompt returns. We can handle any quantity expeditiously and efficiently. Cut this advertisement out and write for Stencils, etc. Address your enquiries to our

SALES MANAGER—

SANG GOON
and Co.

FRUIT IMPORTERS AND EXPORTERS AND GENERAL COMMISSION AGENTS

Head Office—

No. 56, New Wholesale Fruit Market, Melbourne

(Also at 327 King Street, Melbourne)

G.P.O. Box 1786. Telephone F 5427
Telegrams: "SANG GOON," Melbourne

Reference: Commercial Banking Co. of Sydney Ltd., Bourke-street East

CONSIGNMENTS SOLICITED FROM ALL STATES

A Busy Scene in the New Wholesale Fruit Market.

H. Louey Pang & Co. Pty. Ltd., at No. 4 store, is the well-known firm of Chinese merchants whose efforts to relieve the pressure at the Western market at the conclusion of the World War, brought Little Bourke-street into prominence as a fruit centre. For a great many years, the street was a big factor in the Banana trade, and little was done with other fruits, until Mr. Louey Pang, in 1918, realised the possibilities of turning the street into a market for fresh fruit. The effort was successful. Other Chinese merchants followed his lead, and Little Bourke-street became a centre for the distribution of orchard products.

In 1921 Mr. Louey Pang turned his business into a company composed of members of his family, and extended his trade to the East. Every two years Mr. Pang visits China, seeking markets for Australian fruit, and he has done much pioneering in this direction. His efforts have not yet been crowned with success owing to shipping difficulties and lack of Government interest. He is, however, firmly convinced that there is a big market in the East for Australian fruits, and at present he is sending ten tons of Sultanas to China each month. He is certain that the dried fruit trade could be enlarged conconsiderably if the Commonwealth Government took a little more interest in the business.

Mr. Pang appreciates the better facilities for trading at the new wholesale market, and sees a big advance in distribution. He will, however, still retain his Banana ripening rooms at his Little Bourke-street stores.

* * *

Bell, Banson Pty. Ltd., are at No. 20 store. Mr. Banson, the principal, was reared on a Goulburn Valley orchard, where his family still produce the luscious fruits for which this part of Victoria is famous. Mr. Banson, having a thorough knowledge of the grower's end, came to Melbourne and studied the marketing problems. He was determined to secure the best available prices for the family's products, and entered actively into the sales end at the Western Market.

During the six years he has been engaged on this side of the industry, he has worked up a big business. Besides fruit, he is handling vegetables, and his turnover of peas and beans is one of the largest in Melbourne. Mr. Banson is prepared to receive all products of orchards and gardens, and give them his close personal attention.

* * * * *

F. Cave & Co. Pty. Ltd.—The situation of this company's office and store in the new market, is No. 9, having a frontage to Franklin-street and the Market-square.

Members and staff of this firm have had very many years of experience in handling all classes of fruit for sale on the wholesale markets. They welcome the change into more commodious premises to enable them to cope with the ever-increasing business. Additional space was not possible in the old market, but here they have ample space to successfully handle even larger

H. GRINBLAT

Fruit and Produce
. . Merchant . .

No. 1, New Wholesale Fruit Market
Melbourne
(Corner Peel and Franklin Streets)

CONSIGNMENTS OF FRUIT AND
VEGETABLES SOLICITED FROM
GROWERS IN ALL STATES.
HIGHEST RATES ASSURED.

Country Orders Speedily Executed.
Prompt Settlements.

Telephone: F 6231; after hours Brunswick 569.

Bankers:
National Bank (North Melbourne Branch)

Postal Address:
BOX 1814 G.P.O.

TELEPHONE: F 1885
After 5 p.m., F 8251

(Established 1895)

SAM YICK

(W. KENN, Managing-Director.)

Growers' Agents

No. **39**, New Wholesale Fruit Market
Melbourne

CONSIGNMENTS INVITED FROM ALL STATES. HIGHEST PRICES AND PROMPT RETURNS.

Bankers:
E.S. & A. BANK, SWANSTON STREET BRANCH.

Growers!

Consign your Fruit to

R. A. Wing & Co.

Stencil
R.A.W.
Melb.

Wholesale Fruit and Produce Commission Agents

No. **37**, New Wholesale Fruit Market, Melbourne

Branches at 141 Little Bourke Street and Victoria Market.

GROWERS CAN DEPEND ON **GOOD SERVICE, GOOD PRICES, PROMPT RETURNS.** Our Salesmen are men with long experience in the trade, and we guarantee every grower's products will receive personal supervision in order that full value is obtained for them. Stencils and labels will be forwarded on application.

Bankers—
E.S. & A. Bank,
Swanston Street,
Melbourne

Telegraphic Address—
"WING CO."
Melbourne.

Shipping—
No. 62,
Melbourne.

Telephone—
F 1744.
G.P.O. Box N.1533.

quantities of fruit, and all growers, when in town are cordially invited to call and inspect the company's premises.

The company is the Victorian representative for the Port Huon Fruitgrowers' Co-operative Association of Hobart, and handles for them berry fruits, Apples and Pears, etc., when in season.

The company is a member of the Committee of Selected Agents, appointed by the Tasmanian State Fruit Advisory Board, acting in Victoria for Tasmanian orchardists.

In addition to local marketing, this firm has a very extensive business in the export of Apples and Pears to the overseas markets, and is well-versed in all matters in connection with export, and gladly invites any enquiries from growers. The firm is a member of the Victorian Fruit Marketing Association (Mr. Cave being on the executive), which is doing much to forward the interests of Apple and Pear exporters.

Briefly, Messrs. Cave & Company are growers' agents, not only operating in the wholesale marketing of fruit and vegetables, but also handle and carry stocks of growers' requisites, such as case shooks, paper, woodwool, etc.

Western Market, and these premises will still be retained for the purpose of ripening fruit. Mr. Patrikeos, with the increased accommodation at his command, will now be in a position to handle larger quantities of fruit, and growers are reminded that all varieties of fruits will now be distributed by him.

* * * * *

J. W. Ross will be found at No. 13 Store. When Mr. Ross bought out Gilmore & Co. 36 years ago, he took over one of the oldest businesses in the fruit trade. The store was then in William-street. Mr. Mason, who is now the principal, was then a boy working for Lister & White in the Western Market. He was ambitious, and 26 years ago he went into the business of J. W. Ross, which he now controls. If experience counts in the fruit trade, then Mr. Mason can be expected to put the trade name of J. W. Ross even more prominently before the growers at the new wholesale fruit market.

* * * * *

J. Moss & Sons, who are at No. 11 Store, were established in the fruit trade as far back as 1865 in the Eastern Market. The founder of the firm was the late Councillor Josh Moss, of Fitzroy. From the Eastern Market, Cr. Moss extended the business to Flinders-street, and later to William-street and the Western Market, where the firm has been carrying on for half a century. Two sons of the founder now conduct the business, which has grown to considerable dimensions in recent years.

Western Market Football Team, 30 years ago.

Every class of fruit is handled by them, and a connection of satisfied clients extends to all parts of the Commonwealth. The lifelong experience of this firm in the marketing of fruit in the capital cities will place them on a sound basis in the handling of increased business. Branches have been established in Sydney and Adelaide by J. Moss & Sons, where clients will receive the same considerate attention as they do at the Melbourne store.

* * * * *

L. Rockman, who occupies Store No. 19, on the corner of Queen and Franklin-streets, has been in the Victoria Markets for twenty years, handling all kinds of fruit. He welcomes the opening of the new market in order that he might come into personal touch with the growers. Mr. Rockman is President of the newly-formed Victoria Market Fruit and Vegetable Merchants' Association, and a Life-Governor of Melbourne Hospital. He personally supervises every case of fruit passing through his hands. As a supplier to country shopkeepers, he has opened up a large avenue of trade, and has made provision for handling the increased trade which should be brought about by the establishment of the new market.

The Producers' Co-operative Distributing Society Ltd. (familiarly known as the P.D.S.) are to be found at Stand No. 7 in the new wholesale fruit market. This company is one of the accredited agents for the V.C.C.A. In addition to citrus fruit, large quantities of other produce are also handled. The head office of the company is situated in Sydney, where a very large business is done in the handling of all classes of farm and general produce. The firm's activities also extend to the export business. In this connection, the Sydney manager, Mr. J. W. Blick, visited, last year, the markets of the world. His trip covered the United Kingdom, the Continent, U.S.A., India and the East. A most comprehensive and interesting report of his trip was published in the "Fruit World Annual" for 1930. The Melbourne manager is Mr. J. McNamara, under whose personal attention all sales are conducted.

* * * * *

P. A. Patrikeos, at No. 36 Store, does a large business in bananas, a trade that he entered about 1912 at the old Viaduct Buildings in Flinders-street. As a retailer and wholesaler, he rapidly developed his business, and to-day is one of the leading banana merchants at the wholesale market. For many years he has carried on his business at the Flinders-street end of William-street, close to the

J. Hyman & Son

FRUIT & PRODUCE MERCHANTS,

No. 51, New Wholesale Fruit Market, Melbourne

TRIAL CONSIGNMENTS SOLICITED FROM ALL STATES.

Prompt Settlements

Telephone: F 5495.

Bankers:
National Bank,
North Melbourne Branch.

L. ROCKMAN

Fruit and Produce
. . Salesman . .

Telephones: F 6491; after hours L 3281.

TRIAL CONSIGNMENTS SOLICITED FROM GROWERS IN ALL STATES.

Highest Market Rates Assured.

Prompt Settlements.

COUNTRY ORDERS PROMPTLY EXECUTED

ADDRESS:

No. 19, New Wholesale Fruit Market Melbourne

(Corner Queen and Franklin Streets)

Bankers:
National Bank (North Melbourne Branch)

S. ROSENFIELD

(Established 42 years)

FRUIT & PRODUCE SALESMAN,

No. 48
New Wholesale Fruit Market Melbourne

CONSIGNMENTS SOLICITED FROM GROWERS IN ALL STATES.

HIGHEST RATES ASSURED.

Prompt Settlements

Telephone:
Brunswick 99.

Bankers:
E.S. & A. Bank, Haymarket Branch.

H. & S. Frankel

(Established 35 Years)

Fruit and Produce
. . Merchants . .

No. 44,
New Wholesale Fruit Market, Melbourne

GROWERS IN ALL STATES ARE INVITED TO SEND CONSIGNMENTS TO US. WE CAN ASSURE THEM HIGHEST MARKET RATES AND PROMPT SETTLEMENTS. NO CONSIGNMENT IS TOO LARGE OR TOO SMALL FOR US TO HANDLE.

Telephones: F 1555; after hours Brunswick 870

Bankers:
Commonwealth Bank of Australia.

Arthur Price has a good position in the new market at Store No. 2, facing William and Peel streets. Although a young man in the business, Mr. Price has had considerable experience of the fruit trade. Starting as a retailer at Elsternwick in 1910, he afterwards went to England, and there worked in the wholesale fruit trade, where he learned a good deal of marketing methods in the world's largest markets. On returning to Australia he again engaged in the fruit trade, and in 1927 opened up as a wholesaler in Flinders-lane. Handling all kinds of fruit as a commission agent, he has formed a fine connection among the growers, and with the better accommodation available at the new wholesale market, expects to handle an even greater volume of business.

* * *

H. & S. Frankel, who are at Store No. 44, have been 55 years in the fruit trade at the Victoria Markets. Keen business men, the two brothers have established a fine business, and are at present handling excellent lines from growers in various parts of the State. They are suppliers to shopkeepers and have a large turnover at the market. Oranges from the new citrus groves at Kangaroo Lake have found a ready sale in the hands of this firm, and there are indications that they will handle the bulk of the output in future. They are also handling large quantities of soft fruits from the Goulburn Valley.

* * *

L. Davis notifies growers that he is to be found at No. 49 store in the wholesale fruit market, where he will be pleased to meet them and discuss future business prospects. Mr. Davis has been in the Victoria Market for many years, and is familiar with every variety of fruit sent into the city markets. Growers will find in Mr. Davis a man of wide experience and one who will place fruit to the best advantage.

* * *

Sang Goon & Co., who occupy store No. 56, established their business in Melbourne ten years ago. Mr. Sang Goon was formerly with the well-known firm of Pang & Co., and the experience gained in this connection has enabled the firm to extend its business to Hong Kong, Fiji, Darwin and Sydney. Bananas form a large section of this firm's business, but all kinds of fruit are handled. They are prepared to take consignments of all kinds of tropical fruits, soft fruits, citrus, Tomatoes and mushrooms. With the better facilities available at the new market, this firm anticipate further extensions of their business.

F. A. CHINN & CO.

Growers' Agents,

No. 40, Wholesale Fruit Market
Melbourne

And at 102-104-106 Lit. Bourke Street.

Consignments of All Classes of
Fruit, Peas and Beans

Invited from All Growers, All States.

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Bankers:
Commercial Banking Co. of Sydney,
(Eastern Branch),
Bourke St. E.

Reg. Queensland.
Shipping Number 71.
Best Prices—Prompt Returns.

* * *

H. Anguey & Sons, who are to be found at store No. 47, have been engaged in the fruit industry for thirty years, and have steadily built up a big list of satisfied clients. With the opening of the new market, this firm is in a position to handle increased business, especially as they are large suppliers to retail shops in the country districts of Victoria, New South Wales and Tasmania. Mr. Anguey considers that marked improvement has been effected in recent years in the grading and packing of fruit, and sales have been much better when growers have been careful in this respect. H. Anguey & Sons are prepared to handle all kinds of fruit, including Tomatoes.

* * * *

D. Hyman & J. Harrison, who occupy Store No. 50, have plenty of experience in the handling of fruit in bulk. Mr. Hyman, who has had fifteen years' experience at the Victoria Markets, is Secretary for the Victorian Fruit and Vegetable Merchants' Association, and is also Secretary of their Social Club. The many acts of charity performed by this club has made the Secretary a life-governor to the Alfred Hospital. The firm is now able to handle a larger volume of business at their new store, and consignments from growers will be appreciated.

* * *

S. Rosenfield will be found at Store No. 48, where he will welcome the opportunity to meet growers and discuss business with them. Mr. Rosenfield has been associated with the Victoria Markets for over 40 years, and has a reputation as a salesman that has earned him the respect of growers and dealers alike. He recognises the possibilities of the new market, and is quite prepared to meet the anticipated increase in business that will follow the change over.

* * * *

F. A. Chinn & Co., at No. 40 Store, is one of the well-established firms from Little Bourke-street, who will still continue to carry on business in that thoroughfare, as well as at the new market. Chinn & Co. have a splendid connection among growers, with whom they keep in constant touch by personal visits. They have endeavoured at all times to maintain stable prices for fruit sent to them, and there has been little variation. Chinn & Co. prefer to deal only in the best grades, and have always maintained a high standard.

* * *

J. Hyman & Sons, at No. 51 Store, have been in the wholesale fruit trade at the Victoria Markets for many years, and find the new situation gives them a big opportunity for an extension of their already large turnover in the disposal of fruit. They extend an invitation to growers to visit them and discuss future business. Their store is the nearest to the vegetable market in Queen-street.

* * *

R. A. Wing, who will be found at No. 37 Store, is the well-known Chinese firm from 141 Little Bourke-street. For many years this firm have been handling large quantities of fruit of every description at their city stores and have established a fine business. They have a good position at the new Wholesale Market, and with the better facilities at their command, are able to handle an even greater volume of business than formerly. They are prepared to meet growers and discuss marketing problems at their new store, and invite correspondence from those unable to attend the market personally.

(Established 30 Years)

H. Anguey & Sons

Wholesale Fruit, Vegetable
Produce & Commission Agents

No. 47,
New Wholesale Fruit Market,
Melbourne
(also at 99 Queensberry Street, Carlton)

CONSIGNMENTS SOLICITED FROM GROWERS IN ALL STATES.

HIGHEST RATES ASSURED.

Prompt Settlement.

COUNTRY ORDERS FOR FRUIT & VEGETABLES A SPECIALTY

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Bankers:
Commercial Banking Co. of Sydney,
Lygon Street, Carlton Branch.

O. WALL

Fruit and Produce Salesman

Consignments of Fruit Solicited From Growers in all States.

HIGHEST MARKET RATES ASSURED

PROMPT SETTLEMENT

No. 46
New Wholesale Fruit Market, Melbourne

Telephones:
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Barnet Rosenfield

Fruit and Produce
:: SALESMAN ::

No. 52, New Wholesale Fruit Market, Melbourne

Consignments Solicited from Growers in all States. Highest Market Rates Assured. Prompt Settlements Guaranteed.

COUNTRY ORDERS PROMPTLY EXECUTED.

Bankers:
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Messrs.

D. Hyman & J. Harrison

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Produce Merchants

No. 50,
New Wholesale Fruit Market,
Melbourne
(Corner Peel Street and L Shed)

CONSIGNMENTS OF FRUIT & PRODUCE SOLICITED.

Mushroom Consigners Specially Catered For.
Highest Rates—Prompt Settlement.
Clearances from Railway Station Daily.

Telephones: F 5495; after hours: F 1308

Bankers:
National Bank (North Melbourne Branch).

Wing Young & Co., at No. 38 store, was established in 1920 by four brothers. Success marked their efforts from the outset and now they have a large interstate and country order trade. Branches have been established at Canton and Hongkong for the purpose of exploiting the markets of the East, for the firm expect to be in the position to export large quantities of Australian fruit to China in the near future. The brothers have been growing Bananas in Queensland, and understand this side of the fruit trade intimately, so they are in a position to give expert advice and service on growing and marketing conditions.

Their representative in Queensland is Mr. C. N. Freeman, Noosa Heads, via Cooroy. Wing Young have a large connection among growers of all kinds of fruits and produce, and are accredited agents for the S.A. Tomato and Celery Associations, Woorree Tomato Growers, and Northern District Producers' Association of West Australia.

* * * * *

O. Wall, at No. 46 Store, facing Peel-street, has had a lengthy experience of the fruit trade at the Victoria Markets, and places his knowledge of the marketing end at the service of growers in the disposal of their fruit and other products. Mr. Wall personally supervises all sales.

* * * * *

B. Rosenfield, at No. 52 Store, occupies a fine position on the Queen-street frontage, where he will be pleased to discuss the disposal of fruit with growers. Mr. Rosenfield has had a long experience at the Victoria Markets, and understands the marketing end thoroughly.

* * * * *

Wing Hie, at No. 53 Store, is one of the old-established Little Bourke-street fruit merchants who has developed a large business in the Banana trade, and with the greater facilities at his command, now that he holds a good position at the new market, will handle all classes of fruits and market garden produce

D. LUCAS

Fruit and Produce Merchant
Importer, Exporter
and General Commission Agent

132 Franklin Street,
Melbourne, Vic.

Prompt Settlements
Highest Market Prices

Telephone :
F 4394

Telegrams & Cables :
"PAXINOS," Melbourne

* * * * *

H. Grinblat, who occupies No. 1 store at the corner of Franklin and Peel streets, comes from the Victoria Markets, where he had formed a big connection in the disposal of fruit during his 13 years of trading there. Mr. Grinblat is a native of Ballarat, where his father was in the fruit trade before coming to the Victoria Market. Mr. Grinblat is prepared to handle all classes of fruit, and is now in a position to dispose of large quantities.

* * * * *

Sam Yick, at No. 39 Store, is the trade name of Mr. Kenn, the present principal. Mr. Kenn is a son of the original Sam Yick who established the business 40 years ago. The Banana trade was the chief line of business in Sam Yick's time, but now all fruits are handled. Mr. Kenn is Secretary of the Chinese Fruit Merchants' Association, and has taken an active part in the fruit trade for 17 years. He has representatives throughout the fruitgrowing areas, and is doing a big business.

CHINESE FRUIT MERCHANTS.

Interesting Dinner Function.

TO CELEBRATE the opening of the new wholesale section of the Queen Victoria Markets, the Chinese Fruit Merchants held a dinner function on November 1, at the Hongkong Cafe, Melbourne.

The dinner was served in Chinese fashion and was greatly enjoyed by all. The dinner commenced with birds' nest soup and finished with bamboo soup. There were twelve courses, including meat, poultry and fish, rice and sweets served in a most appetising manner, though to a European the style was quite novel. After a little practice the visitors, particularly Mr. J. M. Ward, Superintendent of Horticulture, became expert in the use of chop sticks.

Mr. H. Louey Pang, who presided, urged the shortening of the hours for marketing. Opening at 4 a.m. on Saturday and 5 a.m. on other days was too long—worse than in China.

Mr. J. M. Ward congratulated Mr. Minns on the successful completion of his long-cherished plans for concentrating the fruit trade at the Victoria Markets.

Mr. G. B. Minns, Superintendent of Markets, Melbourne City Council, said he was pleased at the opening of the new wholesale fruit market: there had been many obstacles to overcome. The new markets would be a great service to the whole of the fruit industry.

The President of the Wholesale Fruit Merchants' Association, Mr. H. M. Wade, in a pleasant speech, recommended the formation of a federation of Fruit Trades Associations. He stated that Mr. J. Davis was consistent in his efforts to serve the trade and the industry.

Mr. L. Rockman, President of the Queen Victoria Wholesale Fruit and Vegetable Merchants' Association. stated that much good should result from the concentration of the trade at the new wholesale market.

Mr. C. Parnell, Melbourne representative of the Committee of Direction of Fruit Marketing, Brisbane, said that the new markets were satisfactory and would prove advantageous for the fruitgrowers of Queensland.

Mr. R. E. Boardman said the new wholesale fruit markets were up to date and compared very favorably with the best in old world cities. It was pleasing to note the increasing co-operation between grower, wholesaler and retailer to the benefit of the industry as a whole.

MANCHESTER

[Via the Manchester Ship Canal]

Geographically situated in the heart of England's principal industrial area, the port is the best and cheapest centre for serving 12 million consumers and for the export of manufactured goods they produce.

Canal and Docks 28 feet uniform depth; modern equipment designed to expedite receipt and distribution of perishable produce; all berths connected with main line railway systems.

Imported Fruit Sale Room, Manchester.

A sale in progress attended by wholesale merchants from all the principal cities and towns in the North and Midlands; upwards of 100,000 packages have been sold by auction in these rooms in a day. The lifts in the left foreground convey samples for inspection from rooms below.

Ship Direct to Manchester

The Commercial Hub of the North and Midlands.

The port which has more consumers within 75 miles radius of its markets than there are in the corresponding radius around London.

This enormous population requires large quantities of imported fruit and other produce, and much of that which is landed in London and other ports is ultimately railed or transhipped by steamer to Manchester markets for distribution. The producer pays (directly or indirectly) the extra transport charges involved, plus the original importers' commissions and profits.

With few exceptions, the average prices realised at Manchester for Australian and Tasmanian Apples are higher than at any other British port; price records extracted from the Weekly Market Reports, (issued by British Ministry of Agriculture), as also addresses of Manchester fruit brokers and merchants, and all other information re port and selling charges, etc., will be supplied on application to:—

CAPT. W. J. WADE

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We are the largest Buyers in Australasia

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GENUINE
"BLACK LEAF 40"
(Nicotine Sulphate)
Distributors
The Producers' Co-operative Distributing Society Ltd.
Melbourne, Sydney, Leeton, Newcastle Etc.

NEW ZEALAND.

Under date November 10, the Director of the Horticulture Division, Mr. J. A. Campbell, sends the following reports from his officers regarding the coming fruit crops.

Auckland.—Apples and Pears: varieties blossomed freely; Peaches: good setting early varieties, others fair. —(L. Paynter.)

Thames.—Apples: heavy blossom; Apricots: frost damage, brown rot in evidence; Lemons: summer crop expected to be light; Pears: heavy crop expected.—(L. M. Estcourt.)

Waikato.—Apples: blossom fair; Nectarines: fair crop set, brown rot prevalent; Peaches: fair to medium; Pears: fair, but brown rot very pronounced.—(R. G. Hamilton.)

Gisborne.—Apples and Nectarines: light; Apricots: average; Peaches: medium; Pears: W.B.C. heavy, others medium to light.—(P. Everett.)

Hawkes Bay.—Apples: good bloom, except with Dunns and Dougherty; Pears: good; Peaches: fair prospects.—(N. J. Adamson.)

Manawatu and Wairarapa.—Apples: good setting; Apricots: fair; Cherries: promise for heavy crop; Peaches: fair to light. Season ten days late.—(J. W. Whelan.)

Wanganui.—Apples, Lemons, Pears: average; Apricots: heavy.—(H. F. Frost.)

Nelson.—Apples: good bloom, except with Dunns, Delicious and Statesman; Apricots: good setting, but brown rot in evidence; Peaches: heavy; Pears: promise heavy setting.—(J. H. Thorp.)

Nelson Central.—Apples: fair to good, Delicious patchy, C.O.P. heavy; Pears and Plums: good to heavy.—(M. Davey.)

Motueka.—Apples: heavy blossom, but Dunns, Delicious and Gravenstein patchy.—(G. Stratford.)

Marlborough.—Apples and Pears: heavy; Peaches: fair to good.—(D. J. Hogg.)

Canterbury.—Apples, Pears and Plums: promise of heavy crops; Nectarines and Peaches: average.—(B. G. Goodwin.)

Otago.—Apples and Pears: heavy blossoming; Apricots: heavy.—(G. H. McIndce.)

Central Otago.—Apples: heavy blossom, but Delicious lighter than usual; Pears and Plums: heavy.—(W. R. L. Williams.)

AUSTRALIAN DRIED FRUITS.

Overseas Sales.

The Commonwealth Dried Fruits Export Control Boards advise that the total shipments of dried fruits to the 21st November were as follows:—

To British Ports	42,602	tons
„ Canada	5,663	„
„ New Zealand	1,732	„
„ Other destinations	708	„
	50,705	„

During the week ended 20th November, 795 tons were sold in Great Britain for a total value of £32,170.

These sales included 655 tons Sultanas at an average price of £42; 99 tons Currants, averaging £33/10/-, and 41 tons Lexias, which averaged £32/10/- per ton.

Victoria.

Woorinen.—The principal fruits in this district are Sultanas, 1,596 acres; Currants, 156 acres; Gordos, 157 acres.

Crop Prospects.—Following two heavy bearing seasons, Sultanas are light this season; Currants heavy; other vines normal showing.

Unfortunately, October was a very wet month, and black spot made its appearance. It has done some damage. However, given normal weather conditions from now on, it should cease working to any extent, but growers will need to take every precaution the coming pruning season.—P. G. Baxter.

TREES

Plant Goodman's Fruit Trees, and, season after season, you'll get bumper crops of first-class fruit, commanding highest market prices. Reliable Trees sent to all parts of Australia. Full information, Price List, etc., free.

GOODMAN'S NURSERIES
P.O. Box 47. BAIRNSDALE, VIC.
(W. McF.)

TASMANIA.

State Fruit Advisory Board Meeting.

Appointment of Selected Agents in London Discussed.

Decision Deferred Awaiting Report of Royal Commission.

AN IMPORTANT MEETING of the Tasmanian State Fruit Advisory Board was held on November 18.

Selected Agents in England.—Mr. J. P. Piggott, M.H.A., submitted a comprehensive report of his visit abroad. A meeting had been called in London, when leading fruit importers had approved of the idea of forming a Committee of Selected Agents to supervise the importation of Tasmanian fruit.

It was decided to cable the overseas agents stating the report had been received and that decision postponed pending the receipt of the Royal Commission's report.

Mr. H. G. Colombie, President Victorian Fruit Marketing Association, gave information regarding the forthcoming Australian Conference of Apple and Pear growers and exporters. It was decided to be represented, and that the delegates be Messrs. B. J. Pearsall, M.H.A., Neil Campbell, M.H.A., E. Ross, and P. H. Thomas (Secretary).

Winkleigh (West Tamar).

Mr. Neil Campbell, M.H.A., writes:—The chief varieties of fruit grown here are apples and pears of the leading commercial lines; very little stone fruit. The prospects for the coming season at present seem to be normal, with the exception of perhaps Cleos and Dunns, which appear to be light in at any rate most orchards that the writer is in touch with. There is a general feeling among growers that those who control the Tasmanian industry, that is the growers themselves, must improve marketing methods by getting a complete organisation of the industry.

Premaydena.

Apples are the principal fruit grown in this district, and I estimate the crop as follows:—Tasma (Democrat), 100 per cent. normal; Jonathan, 80 per cent; Sturmer, 90 per cent.; Cleopatra, 70 per cent.; Scarlet, above normal; Delicious, 90 per cent.; other varieties, 70 per cent. Total, 85 per cent.

Pears, 100 per cent.

Orchards look remarkably well, and well cultivated.—T. K. Kingston.

Franklin (22/11/30).—The crops grown in this district are Apples and Pears. Varieties are as follows:—French Crabs, Cleo., Searlet Pearmain, Sturmer, Jonathans.

The coming crops are expected to be about 60 per cent. of last year's crop, with the exception of Cleos., which are about 30 per cent.

We are endeavouring to lessen the number of varieties by budding and re-working.

Pears of all kinds show well as regards crops, but they are still falling, and may have been affected by the frost we had a few days ago.—N. B. Barnett.

THE BAGDAD VALLEY.

The crop on our orchard is good to heavy right through (but this is no criterion of the rest of the Bagdad district). From what I can gather, prospects are as under:—

Apples.—Scarlets patchy. Cleos., Democrats and Jons. light. Sturmers good. Apricots.—Light. Plums.—Good.

The season so far has been very dry, and the rainfall is well below the average.

Spraying has been cut down to a minimum on account of the disastrous returns for last season's crop.

There is very little sign of black spot at present owing to the dry season. Orchards are mostly well on with cultivation.—Bisdee Bros., Hutton Park, Melton, Tas., 17/11/30.

CASES FOR EXPORT FRUIT.

Grower Says Hardwood Satisfactory if Seasoned and Dressed.

Mr. G. E. Richards, a well-known fruitgrower of Sutton Grange, near Harcourt, Victoria, interviewed by a "Fruit World" representative recently, stated that although much had been spoken against the Australian hardwood case, he personally had found by experience that the seasoned and dressed hardwood case is superior to softwood case, and carried the fruit better.

Mr. Richards states he wrote to some dozen leading agents in the United Kingdom and the Continent, and they all advised him to keep to the hardwood case.

Particular emphasis is laid, however, on the necessity for the cases to be seasoned and dressed.

Port of Manchester.—An interesting booklet advertising the Port of Manchester has been received by the "Fruit World," and we congratulate the Manchester Ship Canal Company on their enterprise.

Classified Advertisements.

FOR SALE.—Harvey One-way Disc Cultivator, with ploughing gang attachment.—J. S. Eales, Lilydale.

Fruit Trees.—Trevatt Apricot, budded from specially selected fruiting trees, guaranteed absolutely true, and the best-rooted trees obtainable, current prices. **Weare's Nurseries, Griffith, N.S.W.**

EDGELL SPRAY PISTOL.—Does quicker work, saves pounds' worth of spray every week. **KEMICO ODORLESS CLOSETS, MAXIM LANTERNS, 300 C.P. KEROSENE, DEMON COOKING STOVES, AIR GAS MANTLES.** Catalogues free.—T. W. SANDS, 372 Lonsdale-street, Melbourne.

WESTERN AUSTRALIA.

Mt. Barker.—Mr. A. T. Booth, Mt. Barker Fruitgrowers' Co-op. Society Ltd., advises under date November 20 that the crops are exceptionally light, owing to a devastating infestation of thrips. Cleos., Dunn's and Yates are almost a complete failure. Jonathans are the largest crop, and there is a light sprinkling of Granny Smiths and Rokewoods.

The loss of crop is to be all the more regretted as the growers generally have been far more keen in manuring, spraying and cultivating their orchards.

This constitutes the **third serious outbreak** of thrips during the past 15 years, and growers are urging that this form the subject of intensive scientific research.

Mundaring.—The Eastern Hills Fruitgrowers' Association is established to improve conditions in the fruit industry. The President is Mr. Howatson, and the Secretary Mr. T. H. Ilberry, Mundaring, W.A.

Karragullen.

Mr. Hector J. Price, manager Illawarra Orchards Ltd., Karragullen, writes under date November 15th:—

Apples and pears are the principal fruits grown in this district. The chief varieties of apples are Granny Smith, Yates, Dougherty, Rokewood, Cleo, Tasma, Dunns, and Jonathans, in that order. The Bartlett predominates amongst the years, and is practically the only variety grown of any consequence.

Thrip caused considerable damage, especially to the varieties that flowered late. There was a wonderful show of blossom.

We estimate a 65 per cent. bigger crop than last year (1930 season), which was decidedly light, but only about 90 per cent. of 1929 crop, which was a record. Not taking grafts, which are just coming into bearing, and making the percentage bigger, into consideration, there would only be about 75 per cent. of the 1929 crop.

Bartlett pears are heavy—about 90 per cent. of last year.

There was no new developments in this district, as the Government resumed quite a number of orchards in connection with the Perth Water Supply Scheme a few years ago.

The Cutler Grader, which we installed several months ago, and has been in use during the winter, grading cool store fruit, has given satisfaction, and should be a boon in the coming export season.

In connection with the apple crop, Jonathans and Grannies are heavy, Cleos and Dunns medium, Dougherty, good; Rokewoods, patchy, and Yates light.

Dried Fruits Board.

At the monthly meeting of the Western Australian Dried Fruits Board held at the end of Ocober, there were present Messrs. F. W. Davis (Chairman), A. D. Doig, R. J. Lowson, G. M. Brown, and the Secretary, Mr. E. H. Rosman.

Publicity.—Arrangements were approved for a dried fruits display in the window of the Council of Industrial Development, the last week of November or first week of December, also a moving picture film.

Offence Against Act.—The Chairman reported that a Perth firm had advertised Sultanas for sale in cartons, which had obviously been imported from another State. The Act had been contravened, the firm concerned not being registered as a dealer. Telegrams were exchanged with Victorian and N.S.W. Dried Fruits Board, and the Federal Department of Markets, and it was decided to leave the matter in the hands of the Chairman to institute legal proceedings if deemed advisable.

State and Federal Boards.—The view was accepted that it would be inadvisable for the State Board to be superseded by a Federal Board.

Dipping the Fruit.—The Chairman reported that he had received a request from the Commonwealth Officer, Melbourne, for detailed information as to the nature of the dips in use in West Australia. He had replied that the cold dip had been abandoned after a trial, as unsuitable to the climate, that boiling, caustic soda solution dip was used by a few still, but that the majority used the modified hot dip, with a variation of temperature from 192 to 200 Fahrenheit.

Visitor from Leeton, N.S.W.

Mr. Geo. H. Carlson, fruit packer, of Leeton, N.S.W., visited Melbourne recently. He reports that Apricots are light, the principal variety is Trevatt, Moorparks also grown. Canning Peaches heavy, principally Pullars, Cling and Golden Queen. Discussions are proceeding between cannery and growers regarding prices.

Rice production came as a Godsend to the M.I.A.; even the poor land would produce good rice crops; with modern machinery for planting and harvesting, rice could be produced very economically.

Mr. Carlson, in his packing shed has an up-to-date "Lightning" grader. Fruit is packed for growers (each grower's fruit being kept separate), and sent forward to market, the returns being forwarded to growers, less charges.

FRUIT TREES

ONE GROWER SAYS—

"The trees (750) arrived in excellent order and are of exceptional quality. Our local inspector said they were the best trees he had seen. You will get my order, about same number, for next year."

QUALITY.
QUANTITY AVAILABLE.
Catalogs and price lists from—
John Brunning & Sons
Somerville Nurseries,
Somerville - Victoria - Australia
Established 1866.

Our Export Case Problems.

To the Editor, "Fruit World."

Seeing that a conference has been convened by the Victorian Fruit Marketing Association for 10th and 11th December, which conference is to be attended by delegates from all States, the time is opportune that many points for consideration could be enumerated in the columns of your valuable paper.

Firstly we will take the position as it stands in the apple export trade. We have two classes of boxes, one being Australian hardwood dump case (18in. x 14¼in x 8 2/3in.), the other the Canadian standard (18in. x 10½in. x 11½in.). There has been a great amount of criticism of the fruit grower by certain interests, because he is taking a definite turn towards the using of the Canadian softwood standard. In fact, he is called unpatriotic; yet it is because of the lack of foresight on the part of our past Governments in not going into the forestry question more thoroughly, that we are not using an Australian softwood case. We have a timber here (Pinus insignis), which, if properly treated, makes a better case than the imported pine. Growers who have used cases made from this timber can draw their own conclusions. I would like them to ask themselves (if they have any doubt as to the usefulness of this timber for export purposes), whether the timber they used had been properly treated and handled. Readers should also ask themselves if this criticism which has been levelled at the grower is warranted, after studying the following facts. I will take each point and deal with it in turn.

The Hardwood Case.—Reliability of timber as supplied to growers:—The hardwood timber is supplied to growers in variable sizes and thicknesses. In most sheds where the hardwood is used they have to put the ends over a saw bench to cut them down to the required width, 8 2/3in. In many cases they are up to 9¼in. in width. Why should the grower be put to this inconvenience and expense? If the cases are not cut down, it means, if they are packed when they are 9¼ inches in width, the grower is going to give away one case in every fifteen that he packs.

The softwood case has very little variation (if any) in the sizes of timber, and does not have to have anything done to it after delivery to grower or shed. Hardwood timber is invariably stained through the natural gum of the tree, and also through coming in contact with water after being cut. The softwood is not so affected. It always maintains its white appearance.

Elasticity.—That which is absolutely essential in a case is a certain degree of elasticity, for the following reason: If the case with a certain amount of give and take is roughly handled, the fruit in it will not be so badly bruised, as in the case which is rigid. As an illustration, I would quote an example which appeared in the "Fruit World" last August, under "Better Packing for Export." Thus:—"I would ask you to picture a box made of mild steel and packed with our best apples. With all the rough handling that takes place in transit, the box would come through all right, but what would happen to the fruit? You would find that it had taken all the shock, and not the box, with the result that it would be badly bruised."

This is a very good illustration. With the hardwood the timber is harder and has practically no elasticity, whereas softwood is a softer timber, is very springy, and has that degree of elasticity which is required for an export package.

Weight.—Another factor is the weight of the shooks and the weight of the box when made up. The hardwood shooks are approximately three times the weight of softwood; this refers to the sappy and wet shooks which are supplied in thousands to the growers and sheds. The kiln-dried or seasoned shooks are about half as heavy again as the softwood. This factor of weight must be given serious thought, as it costs about twice as much for the freight on a given quantity of hardwood shooks as it does on a similar quantity of softwood. This factor also comes under notice in Great Britain, as all freight is by weight. Weight is another factor in the handling of fruit.

Nails:—The number of nails used in the making of the dump case (three-piece sides, two-piece bottoms) is 42 as against 32 in the standard. This is quite a consideration when you get into quantities, particularly the additional time taken up driving ten extra nails, irrespective of the cost of same.

One of the most expensive factors to the user of hardwood is the carry over each year of shooks. You will find that very few are fit to use the next year, therefore they are a dead loss to the grower or shed. They warp and twist into all shapes and sizes. The softwood can be carried from one year to another without any loss whatsoever. Some people maintain that a kiln-dried hardwood box will not warp. But place them where they get damp and you will find otherwise.

I saw one consignment this year that had been packed in out-size hardwood dump cases, and stacked in a shed whilst awaiting instructions to rail to ship's side. In three days the cases had shrunk that much that the fruit was very badly bruised. Fruit is often badly cut through boards warping and turning in.

There are many other points which could be brought up, but I think this will suffice for the present.

These remarks have not been made from an interested party point of view, but with a view of placing the facts before the growers. The writer would be very pleased if it were possible to make all of our boxes of Pinus insignis, instead of importing timber.

CASES FOR PEARS.

Having dealt with the apple cases, I would like to add a few remarks re the pear cases.

At present we are shipping in no fewer than six types of boxes. These comprise the half-dump, the long flat bushel, half dump cut like two trays; sets of three trays, dump cases, standard cases. Is it any wonder that other countries are amused at our efforts. We have been exporting for years and do not seem to have got any further. Why not scrap all these cases and get down to the American pear case 18in. x 11½in. wide, 8in. deep. This case is somewhat similar to the half-dump, it not being quite so wide.

I have taken out an average this year from official sales sheets, and have found that two half-dumps are a little (approx. 1½ per cent.) ahead of the long flat bushel, a case that is much fancied by some districts.

Referring to the American pear case as aforementioned, I would like to state that it is a replica of the standard apple case, with the exception of the depth (i.e., 8in.), as compared with 10½in. in the standard. This case has thin lids and bottoms and is cleated, and packed with a bulge. This is a case very much in demand on the Continent and United Kingdom.

The long flat bushel and the half-dump have both carried the fruit exceptionally well. Two points against the flat bushel are its cost, and, according to reports from overseas, the fruit arriving slack after shrinkage has taken place. I cannot see how these two points can be eliminated entirely. The cost certainly rests with the maker. The slackness would probably be overcome by putting a bulge in and not nailing the lid at the division piece, similar to the bushel and a half.

In conclusion I would ask the delegates at the conference to endeavour to reach some definite finality, something which will be binding on all concerned in the industry.

We have allowed ourselves, in some respects, to drift back further than we were twenty years ago. Let us try and get out of this rut.

W. L. GREGORY.

Melbourne, 21/11/30.

GOULBURN VALLEY PEARS.

Reports from the Goulburn Valley state that the Pear crop is light—practically half of normal.

MONEY IMMEDIATELY AVAILABLE.

FROM LOWEST CURRENT RATES.

£25 up to £250.

Extended Monthly Repayments

NO COMMISSION

SPECIALTY INVESTMENTS PTY. LTD.,

89 Collins St., Melbourne, C.1. Cent. 2643.

VISITING SCIENTIST.

Mr. R. G. Hatton, M.A., of E. Malling Research Station.

Mr. R. G. Hatton, M.A., Director of the East Malling Research Station, will be in Australia during December and January. At the East Malling Research Station many valued experiments have been carried out with fruit tree stocks.

Mr. Hatton is assured of a cordial welcome in Australia. During his stay in Victoria he will be associated with the Department of Agriculture. His visit to Australia is arranged by the Council for Scientific and Industrial Research under the auspices of the Empire Marketing Board. Mr. Hatton's itinerary is as follows:—

December 12 to 20.—Victoria, visiting Doncaster, Goulburn Valley, Harcourt, Mornington Peninsula, etc.

December 20 to 27.—Tasmania.

Returning to Melbourne, Mr. Hatton leaves on December 29 for Adelaide. From December 30 to January 4 he will be in and around Adelaide. He will then go to Renmark, visiting Mildura about January 7. The next few days will be spent on the Murrumbidgee irrigation areas, and from January 13 to 16 Mr. Hatton will be in and around Sydney.

January 17 to 22 will be spent in Queensland, and on January 23 this distinguished visitor will leave for Java.

We are sure that as many growers as possible would like to meet Mr. Hatton. It is felt that his visit will be an inspiration towards increased research work in Australia.

TREASURY NOTICE

A COMMONWEALTH LOAN

Is Now Open for Subscription

Subscribers have the advantage of three options, viz., a

6% LOAN REPAYABLE ON 15th DECEMBER, 1932; or
5¾% LOAN REPAYABLE ON 15th DECEMBER, 1940; or
5½% LOAN REPAYABLE ON 15th DECEMBER, 1950.

All persons who have holdings in the 6% COMMONWEALTH LOAN maturing on 15th DECEMBER, 1930, are invited to convert into this Loan under either of these options. They may convert their holdings in whole or in part (with a minimum of £10).

CASH SUBSCRIPTIONS are also invited. Subscribers can invest for either of the three periods mentioned—Bonds can be purchased for £10, £50, £100, £500, and £1,000. Stock can be purchased for £100, or any multiple of £10 above £100.

This Loan offers every attraction to investors—convenient currencies, an excellent interest return, and the soundest of security.

Interest is FREE OF STATE INCOME TAX.

Full information and every assistance from

Banks, Savings Banks, Money Order Post Offices,
Members of Stock Exchanges.

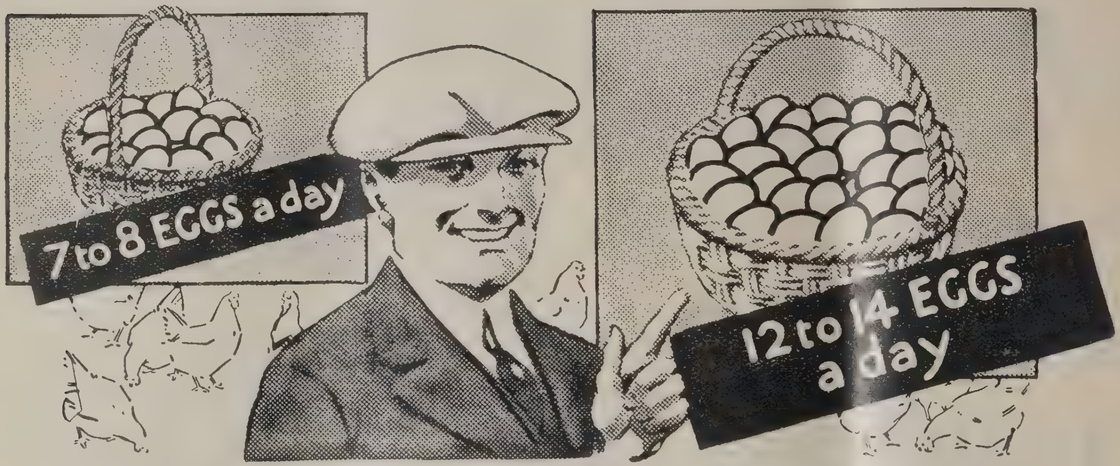
Stock and Bonds of this Loan will be accepted in payment of Commonwealth Estate Duty.

COMMONWEALTH TREASURY,
CANBERRA.

J. A. LYONS,
Chairman of Australian Loan Council.

Without KARSWOOD

With KARSWOOD



The writer of the first letter published below relates how he increased his production from 7 and 8 eggs per day to 12 and 14 eggs per day by feeding his 18 fowls with Karswood Poultry Spice. Karswood Poultry Spice increases egg production to an amazing degree, but it brings about its results in a perfectly natural manner. It does not force, because it contains no forcing ingredients. It does however contain ground insects, which provide just those constituents (including organic phosphorous) necessary for the formation and growth of large sized eggs. A tablespoonful in the evening mash is enough for 20 birds. Buy a packet to-day and prove its efficacy to your own profit.

"From 7 Eggs a Day to 14 Eggs a Day"

Dear Sir,

I have only 18 fowls and two roosters. Before I started to use Karswood Poultry Spice I used to only get 7 and 8 eggs a day; but since using Karswood Poultry Spice, I have obtained 12 and 14 eggs a day. I can highly recommend it to anybody who has not used it and I am sure they will be of the same opinion as I am. Wishing you every success in your business.

(Sgd.) E. G. J. Mascot.

Original letter on file for inspection.

"Always Have Eggs—Winter and Summer"

"I would like to let you know what results I have obtained from your Karswood Poultry Spice. I first gave it to 9 Black Orpington Pullets 6 months old, they were laying 5 to 6 eggs per day, but after a fortnight of Karswood Spice I got, 7, 8 and 9 eggs per day and they kept same up for the winter months. I now give it to all my fowls with the result I always have eggs winter and summer, and again my fowls always look healthy. Different travellers who have called at my place say they have never seen fowls in all their travels that looked as healthy as mine. Again thanking you for your great help. I might say you can use this as you like."

(Sgd.) GEO. McDERMOTT,

6/6/29 *Amphitheatre, Victoria.*

"From 1 Egg a Day to 8 Eggs a Day"

I have much pleasure in informing you that I was only getting about 1 or 2 eggs a day from eight hens, but, since using Karswood Poultry Spice, I have been getting eight eggs per day and the chickens and ducks are growing wonderfully. I will recommend it to anyone.

(Sgd.) MRS. MACDONALD, Euccrabendinni E.

23/10/29 *Bowraville, N.S.W.*

Note the Economy

1/– packet supplies 20 hens for 16 days; 2/– packet supplies 20 hens for 32 days; 13/– (7lb. tin) supplies 140 hens for 32 days.

Supplies

Karswood Poultry Spice is obtainable from all wholesalers and stores at the following standard retail prices:—½lb. packet, 1/-; 1lb. packet, 2/-; 7lb. tin, 13/-; 14lb. tin, 25/-; 28lb. tin, 48/-

Z.M.30

KARSWOOD POULTRY SPICE

Increases egg-production without forcing, because it contains ground insects but no cayenne pepper, etc.

POULTRY AS A SIDELINE.

"POULTRY as a sideline" formed the subject of an interesting paper read by Mr. K. Skeer before the Millicent branch of the Agricultural Bureau of South Australia. In the course of his remarks, Mr. Skeer stated:—

"Better chicks were raised from hens three years or older, but when the hens passed the third year they were not so profitable from an egg-producing point of view. Branding the eggs was a good thing, as it placed the responsibility for bad eggs on the right persons. Never set eggs of less than 2 oz. in weight, nor very large ones. Iodate of potash fed to breeding hens was said to ensure more reliable hatching. Eggs were preferred when no roosters were kept, and ensured a better price when they could be relied on as infertile. It was better to separate the sexes as soon as distinguishable. Barley was preferred by some as the best egg-producer in this cold climate. Where fowls were running out, two feeds per day were sufficient. As much grain as they would eat in 20 minutes was a simple means of finding out the quantity to feed to a flock. Fifty fowls of the right ages and breeding would give better results than 100 nondescripts of uncertain age and type. (Secretary, Mr. E. Mitchell.)—"S.A. Journal of Agriculture.")

Answers to Queries.

BUMBLE FOOT.

Question:

"M.C." (New Beith, Q'land), writes:—

Can you tell me what I can do for one of my White Leghorn's legs? It has like a corn on the bottom of its foot, and there seems to be a lot of gathering between the toes. Will I open the foot, and which way will I cut it? Can it bleed so much that the fowl might die?

Answer:

Your White Leghorn is suffering from what is known as Bumble Foot, a swollen condition of the ball of the foot, caused either by jumping from high perches on to a hard floor, or being confined on hard or stony ground.

When the foot has become inflamed, as in this case, wash with warm water and paint with iodine. When dry, make an incision across the ball of the foot with a sharp knife, and gently work out the core. Wash the affected part with a disinfectant or peroxide of hydrogen, and then bandage. Examine daily and each time paint with iodine. There should be no danger of the bird suffering from loss of blood. If the foot swells again it may be necessary to repeat the operation. See that the bird is kept in a clean pen, and that no dirt is allowed to get into the wound.

ABNORMAL EGGS.

Question:

"J.C." (Kalgoorlie, W.A.), writes:—

Amongst my flock this year I have found several birds which have been laying abnormal eggs. Could you tell me if there is anything in the treatment of the birds that is responsible, or is it some inherited weakness in certain birds.

Answer:

A diet of soft mash that is too stimulating will sometimes have a bad effect on certain birds in the flock. Over feeding may produce an increased number of eggs or may simply result in adding fatness to the birds, according to their temperament.

Those that will not be able to stand the forcing nature of the food may be affected to the extent that they will produce double-yolked or shell-less eggs with a certain degree of regularity. If it is found that the birds are too fat, a reduction in the wet mash allowed may put matters right.

MINERALS FOR GROWING STOCK.

Question:

"Interested" (Wodonga), writes:—

Is it necessary to add mineral matter to the diet of young stock, and what items contain a high percentage of mineral matter?

Answer:

Young stock require a proper supply of minerals in order that they might build a strong frame-work of bone at a rapid rate. Most common foods are deficient in calcium and phosphorus, two elements that constitute over 90 per cent. of the bones. Oyster shells, limestone, and milk will supply calcium, while bone meal or milk is rich in phosphorus.

In some cases, however, abnormal egg weakness is constitutional, and cannot be checked, though it is often governed by the feeding of a forcing diet. Layers of shell-less eggs should be removed from the flock, otherwise there is an inclination on the part of other birds to consume these eggs, and possibly commence the habit of egg-eating.

TABLE FOWL CROSS.

Question:

"Reader" (Bacchus Marsh).

What two breeds would you recommend for crossing purposes to produce the heaviest table fowl?

Answer:

There are breeds of poultry especially suitable for table purposes that would obviate the necessity for crossing. The table market usually prefers a white-fleshed bird and one that is light in feathering. Buff Orpingtons or Sussex both make excellent table birds, as do also the French Faverolle, which is not so well known in Australia, and the Old English Dorking, which cannot be surpassed, although it will not do as well under the intensive system as the other breeds.

If you desire to cross two breeds, however, I would suggest an Indian Game male mated with a Light Sussex hen; such a cross would provide a carcass carrying a good supply of well flavoured flesh. If procurable, a Faverolle male mated with an Indian Game female also makes a good table cross, as does also the Faverolle-Sussex cross. Indian Game-Buff Orpington cross is also favored by many breeders of table poultry.

The Fruit Trade

Market Reports and News Items

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS,

Advertising in this Journal.

NEW SOUTH WALES.

Sydney:
Chilton, F., City Fruit Markets.

VICTORIA.

Melbourne:
Andrew, Fred. J., 416 Lit. Collins St.
Cave, F., & Co., Melbourne.
Colombie, H. G., Temple Court.
Davis, J., Pty. Ltd., Western Market.
Mellor, F. R., 440 Elizabeth Street.
Millis, A., & Sons, Western Market.
Lister, G., Western Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., 449 Flinders Lane.
Pang & Co. Ltd., H. L., Little Bourke Street.
Producers' Dist. Society, Western Market.
Renouf, R., Western Market.
Ross, J. W., Western Market.
Scott & Edwards, King Street.
Silbert, Sharp & Davies, Western Market.
Stott & Son, T., Western Market.
Tim Young & Co. Pty. Ltd., Western Market.
Vear, F. W., 49 William Street.
Wilson, H., Western Market.
Woolf, G., Western Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Western Market.

QUEENSLAND.

Brisbane:
Barr, A. S., Fruit Exchange.
Collard & Mackay, Fruit Exchange.
Comino Bros. Ltd., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Whitten, W. J., & Co., Fruit Markets.

TASMANIA.

Hobart:
E. R. Cottier Pty. Ltd., 88 Collins Street.
Jones, H., & Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.

Launceston:
Bender & Co. Pty. Ltd., 100 Elizabeth Street.

NEW ZEALAND.

Dunedin:
Co-operative Fruitgrowers of Otago Ltd.

GREAT BRITAIN.

London:
Charles Knights Ltd.
M. Isaacs & Sons Ltd.
Margetson & Co. Ltd., Covent Garden.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, Covent Garden.
Dan Wuille & Co. Ltd.
The White Service,
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.

Hull:
Connelly, Shaw Ltd.
White & Son Ltd.
W. G. Gosling.
The Port of Hull, London and N.E. Railway. Rep., Major H. S. Cole, c/o Burns, Philip & Co. Ltd., 7 Bridge Street, Sydney.

Manchester:
The Port of Manchester. Rep., W. J. Wade, 8 Bridge Street, Sydney.

Liverpool:
MacGeorge & Jardine.
Woodall & Co.
Liverpool Fruit Brokers.
Johnson, T. S., & Co.

Bristol and Southampton:
Bristol Fruit Brokers Ltd.

Cardiff, Belfast and Dublin:
Connelly, Shaw Ltd.

Glasgow:
Russell, Turnbull & Co.

FRANCE.

Scheiber, E., Paris.

GERMANY.

Bremen:
Fruchthandel, Gesellschaft.

Hamburg:
Algemeene Vruchten. Import Maatschappy (also Cologne).
Astheimer, P. H., & Son, Fruchthof.
Heinz-Tiencken.
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg.
Stier, Aug., Fruchthof. Reps., J. B. Mills & Co., Bank House, Melbourne.
Timm & Gerstenkorn.

HOLLAND.

Amsterdam and Rotterdam:
Algemeene Vruchten Import, Maatschappy.

DENMARK.

Copenhagen:
M. Asvarisch, Copenhagen.
International Fruit Import Co.
Kobenhaons Fugtauktioner.

MARKET NEWS AND PRICES

NEW SOUTH WALES.

Sydney (21/11/30).—Mr. F. Chilton, City Markets, Sydney, reports prices as follows:—

Queensland Fruits.—Bananas, 10/- to 18/- per case; Pines (smooths), 9/- to 13/-; Papaws, 6/- to 12/-; Tomatoes, 4/- to 7/- per half-case; Passions, 10/- to 15/-.

New South Wales Fruits.—Bananas, 10/- to 18/- per case; Oranges, Valencias, 4/- to 7/6 per bus.; Lemons, 3/- to 6/-; Apples, G.S., 12/- to 17/-; Passions, 10/- to 21/- per half-case; Peaches, 3/- to 12/-; Plums, 3/- to 10/-; Apricots, 4/- to 12/-; Tomatoes, 6/- to 12/-; Cucumbers, 3/- to 5/-; Cherries, 4/- to 7/- per quarter-case; Gooseberries, 4/ to 7/-.

Victorian Fruits.—Apples: Yates 2⅛, 5/- to 6/- per bus., 2¼ 7/-, 2⅜ 9/- to 10/-, 2½ 11/- to 12/-, 2⅝ 11/- to 12/-; Pears, B.P., 11/- to 15/-.

Tasmanian Fruits.—Apples: Tasma (Democrat) 7/- to 12/- per bus., Crofton 6/- to 11/-, F.C. 9/- to 14/-; Gooseberries, 5/- to 8/- per half-case.

There is a fair demand for all fruits with the remarkable exception of citrus. Prices for Tomatoes and early stone fruits (except Cherries) are likely to ease as heavier supplies come forward.

QUEENSLAND.

Brisbane (22/11/30).—Pineapples, S.L. 9/- to 10/- case, small from 5/-; Mangoes, 3/- to 5/-; Passionfruit, 9/- to 14/- half-case, second quality 5/- to 7/-; Papaws, 2/- to 2/6, special 3/-, others 1/- to 1/6 bus. case; Cherries (light), 5/- to 9/-, (dark) 7/- to 11/-; Apricots, Warwick, 11/- to 13/- half bus. case.

TASMANIA.

Hobart (22/11/30).—Apples: Sturmers 4/- to 7/-, Del. 7/- to 9/-, Demos. 6/- to 7/6, French Crabs 2/6 to 4/6 per case; Strawberries, 9d. to 1/- per punnet; Cherries, 17/- to 20/-; Gooseberries, 2/6 to 3/3 per half-case; Tas. Tomatoes, 22/- to 25/- half-case, others 12/- to 16/- per half-case.

WEST AUSTRALIA.

Fremantle (21/11/30).—Apples: Dunn's, dumps 18/- to 20/-, Yates 21/- to 23/9, Granny Smiths to 21/-, White Winter Pearmains 16/- to 16/6, Rokewood 14/- to 17/-; Pears, Winter Nelis, flats 13/6 to 15/6; Oranges, plain, flats 6/- to 9/6; navels, flats 12/- to 14/-, dumps to 17/-; Lemons, flats 3/- to 7/-; Loquats, flats 3/- to 7/-; Strawberries, 12/- to 19/- per dozen punnets.

SOUTH AUSTRALIA.

Adelaide (22/11/30).—Apples (eating) 6/- to 7/- case, (cooking) 5/- to 6/-; Apricots, 12/-; Cherries (dark) 14/-, (light) 12/-; Gooseberries, 7/- to 8/-; Lemons, 15/- to 16/-; Loquats, 8/- to 10/-; Oranges (common), 7/- to 8/-; Oranges (blood), 8/-; Oranges (Mandarin), 12/-; navel, 10/- to 12/-; Poorman, 7/- to 12/-; Pears (eating), 7/-, (cooking) 5/-.

VICTORIA.

Melbourne (24/11/30).—The following prices are supplied by the Wholesale Fruit Merchants' Association of Victoria:—Apples: Good to choice eating, 3/6 to 8/- a case; cooking, 4/- to 7/-. Green Bananas—Queensland, special and choice, 16/- to 18/- a double case; standard, 11/- to 15/-; plain, 8/- to 10/-; selected lines for country trade higher. Cherries, 9/- to 12/- a half-case. Lemons, 6/- to 10/- a case. Oranges—Common, 4/- to 8/-. Loquats, 3/- to 4/- a half-case. Val., 7/- to 10/- a case. Navel, 7/- to 12/-; selected lines higher. Strawberries, 3d. to 5d. a box. Tomatoes—S. Aust., to 10/- half-case; few lines in good, firm condition higher. Pineapples—Queens, 12/- to 16/- a double case; few 17/-. Cucumbers—Queensland, 9/- to 11/- a case; inferior lower. Marrows—Queensland, 8/- a double case. Papaws, 9/- to 12/- a double case; few higher. Passion Fruit—Queensland, 18/- to 20/- a half-case. Apricots, 4/- to 6/- a half-case. Gooseberries, 2½d. to 3d. a lb.

The Melbourne market manager of the Federal Citrus Council of Australia reports:—"Sales were as follow:—Average standard shed pack navels, 75, 7/-; 84, 8/-; 96, 9/-; 112, 10/-; 26 up, 11/- and 12/-; odd sales to 13/-; selected lines higher, 10/- to 15/-. Commons, standard grade, 4/- to 8/-, few special to 11/-. Valencias, average standard grade, 8/-, all counts in; best counts to 9/-; with odd sales to 10/-; unwrapped Milduras, 10/-; with best counts 11/- and 12/-. Lemons, medium sizes, 180-248, 7/- to 9/-; a few specials higher; small, marked, or large, from 5/-. Grapefruit easier, average standard grade up to 10/-, best counts; specials to 18/-, few selected lines higher."

NEW ZEALAND.

Dunedin (6/11/30).—Reilly's Central Produce Mart reports as follows:—Apples, Del. 10/- to 16/-, small 6/- to 8/-; Sturmer, 8/- to 12/6, cooking 6/- to 8/6; Pears, W. Coles 4d. to 6d., Nelis 4d. to 5½d.; Valencias, 16/- to 20/-; American Grapes, Red Emperors 27/6; Mission Lemons, 50/-, N.Z. 20/-, Australian 27/6; Grapefruit, N.Z. 10/-; Passions, Australian 25/-, N.Z. "Socro" 13/4 quarters, 33/- large; Pineapples, choice Queens 22/- to 25/-; Bananas, ripe 30/-, Queensland 14/- to 18/-; Mandarins, choice 18/-.

Unbreakable Glass Substitute

"WINDOLITE"

which admits the health-giving Ultra-violet Rays (ordinary glass does not). Of immense value to gardeners and others for seed frames, ferneries, glass houses, handlights, bloom and plant protectors. Keeps out frost and cold biting winds; admits the sunshine and the **growth promoting** rays; prevents scorching and drawing of plants.

Use **Windolite** for verandahs and sleep-outs, in factories, for poultry pens and brooders, and wherever glass gets easily broken. Light, flexible, easy to cut and fix. Stocked by Jas. McEwan & Co. Pty. Ltd., D. & W. Chandler Ltd. (and at Fitzroy); Myer Emporium Ltd.

Retailed in 36 inch width at 9/- sq. yd.

Australian Agents: **C. H. Leaver & Co., 524 Collins St., Melbourne.** Send for sample.

THE MELBOURNE AND METROPOLITAN RETAIL FRUITERERS' ASSOCIATION.

THERE WAS A GOOD ATTENDANCE of Delegates at the Monthly Meeting of the Executive of the Melbourne and Metropolitan Retail Fruiterers' Association on November 6th.

Short Weight.—A general discussion took place in reference to the marking of the nett weight on cases of cherries offered for sale in the Victoria Market by local growers (growers that market their own goods). Many delegates complained of deficiencies of six and seven pounds, which at the present prices is a serious matter. Although not inferring any dishonest motives against the growers, retailers consider that with a little care such deficiencies can be greatly obviated, as many of the cases in which the cherries are sold have as many as three or four different chalked or pencilled markings on them, evidently from previous times in use, and therefore mistakes can easily happen.

Retailers suggest that before the fruit is put in the cases all old markings should be obliterated, and thus greatly minimise the trouble; possibly mistakes may occur the other way—a buyer may get an advantage sometimes under the old marking—but if the suggestion is carried out, that would be impossible also.

Now that the berry fruit season is opening, the same suggestion will no doubt be of advantage to both buyer and seller, as most berries are sold by weight, and there is such a variety of containers that great care should also be exercised, and thus avoid the many complaints of incorrect weight so often heard in the past.

Retailers also advise growers to have sets of scales adjusted, which have not been in use probably for some time, and may easily have got out of order.—Edw. W. Thompson, Secretary.

FRUIT RETAIL TRADE SLOW.

Some Observations by the Secretary of the Fruit Retailers' Association.

As regards the retail selling of fruit during the past month, there has been very little improvement. Shopkeepers complain that although prices have been comparatively low for this time of the year, and the fresh fruits are coming in freely, the increase in trade is very poor, many buyers whose purchasing power in the past was lavish, now, through force of circumstances, are compelled to make their purchases on a more limited basis, and although tomatoes have been unusually cheap also, there is not the demand one would expect.

Of course the weather has greatly interfered with the consumption of fruit also, and retailers hope that with warmer temperatures in the near future, they will be able to dispose of much larger quantities, and considerably assist the growers also.

FRUIT AGENCY BUSINESS.

D. Lucas.—In this business, conducted at 132 Franklin-street, Melbourne, the principals have for a long time been associated with the fruit industry. Consignments are invited from growers in all the States, and personal supervision is given to every consignment: the firm has a ready outlet among the best buyers. A representative of the firm is visiting Queensland at an early date to complete arrangements for additional Banana consignments.

QUEENSLAND FRUIT IN MELBOURNE.

THE TONNAGE of Queensland fruit received in Melbourne, since last report, up to the 19th of November, was 2209 tons, consisting of bananas, sugar bananas, pineapples, papaws, passion fruit, egg fruit, beans, cucumbers, marrows and squash marrows.

The quantity for this period has been very high, but shows signs of falling off, and it is expected the quantity will improve towards Christmas.

The general quality of the bananas is not of the best, the Department of Agriculture is keeping a strict watch on the fruit as regards grading, and have rejected a fair number of cases for sale in Victoria.

The entrance of New South Wales beans have made this market unprofitable for Queensland bean growers, as the bean season in Queensland had practically finished. There are practically no arrivals now from Queensland.

Passion fruit are making an early appearance, and sales are very satisfactory.

There has been a drop in the supply of papaws, and this has had some effect on the prices, as with large numbers coming forward the market was in a bad state, and the fruit did not realise full value.

The cucumber season is in full swing, but shows signs of waning, and there are already arriving on this market cucumbers from both Adelaide and Sydney.

There have been a fair number of arrivals per boat of cucumbers and marrows.

The winter crop of pineapples has practically finished, and supplies are short, but with the advent of the summer crop, it is expected that supplies will increase, and pineapples should be bought reasonably round about Christmas time.

Hay Stack Covers

for covering Hay Stacks, etc., Onions, Wheat, Wool, Lucerne, etc., also as a Tarpaulin.

Price: 3-Star.				Price: 4-Star.			
12 x 20	£2	4	6	12 x 20	£3	3	6
12 x 24	£2	15	6	12 x 24	£3	17	0
12 x 27	£3	5	0	12 x 27	£4	4	0
12 x 30	£3	10	6	12 x 30	£4	13	0
12 x 33	£3	17	0	12 x 33	£5	2	0
18 x 20	£3	11	0	18 x 20	£4	14	0
18 x 24	£4	5	6	18 x 24	£5	12	0
18 x 27	£4	15	6	18 x 27	£6	5	6
18 x 30	£5	4	6	18 x 30	£6	18	0
18 x 33	£5	12	0	18 x 33	£7	11	6
21 x 30	£5	19	6	21 x 30	£7	19	6
21 x 33	£6	10	6	21 x 33	£8	16	0
22 x 24	£5	10	6	22 x 24	6	18	0

Size 22 x 24, waggon size only, includes ropes, other sizes, ropes 3/6 extra per cover.

Special Sizes Made to Order.

Also Duck Tarpaulins, Verandah Blinds, Car Covers, Window Blinds, and all Canvas Goods.
Please write for full list.

The WYETT Mfg. Co. Pty. Ltd.
21-23 Bellarine Street, Geelong, Vic.
Secondhand Sacks for Sale.
Manufacturers of all Descriptions of Canvas Goods.

Fruchthandel Gesellschaft

Scipio & Fischer

Fruchthof-Bremen

Fruchthof BREMEN Germany
Cable Address: "Orange," Bremen

Established 1902

AUSTRALIAN REPRESENTATIVES:

Victoria: J. B. Mills & Co., Aberdeen House, 528 Collins Street, Melbourne.
South Aust.: Messrs. George Selth & Co. Ltd., Adelaide.
West Aust.: Messrs. Paterson & Co., Ltd., Perth.
Tasmania: Messrs. H. Jones & Co. Ltd., Hobart.

CITRUS NEWS AND NOTES.

THE Victorian Central Citrus Association is carrying on its useful activity under the leadership of the general manager, Mr. J. A. Parkes.

There has been a steady flow of citrus fruit to the Melbourne market, which is supervised under the auspices of the Federal Citrus Council by Mr. G. E. Kitchen Kerr.

The prices have now firmed, though early in the season the prices were unfortunately very low.

* * *

The market with New Zealand is being steadily developed. Victoria and South Australia are sending to the South Island about 50,000 cases of Oranges this season. The North Island is supplied from New South Wales, and the quantity despatched is estimated to be in the region of 100,000 cases.

Mr. Parkes, when interviewed, spoke of the necessity for New Zealand to be further developed with regular supplies. This work could be best done in a co-ordinated manner, and the hope is expressed that all shipping to New Zealand would recognise this essential duty.

* * *

The N.S.W. Fruitgrowers' Federation recently convened a meeting of fruitgrowers at Leeton, when Mr. Enticknap presided. Mr. H. G. Such, Secretary of the New South Wales Central Citrus Association, stressed the necessity for the export trade.

Mr. J. A. Parkes told of the organisation of the Federal Citrus Council, explaining its functions and urging the necessity for complete organisation of citrus growers on a Federal basis.

Mr. Vagg, of the Griffith Producers' Association, gave figures showing the large potential increase of citrus production. The recently planted citrus areas (allowing for the trees going out of production) would mean a phenomenal increase of Orange production during the next six years.

Mr. R. Williams, Griffith, urged a closer co-operation among growers.

FEDERAL CITRUS COUNCIL.

Necessity for Export.

A MEETING of the Federal Citrus Council was held during November. As a policy the Council affirmed the necessity for exporting 100,000 cases next season. It was hoped to send 50,000 cases to Canada and 50,000 cases to Great Britain. It was recognised that there were difficulties to be overcome in shipping, because of the other portions of the cargo becoming affected with the "citrus taint." However, this subject was being intensively investigated by the Council of Scientific and Industrial Research.

The necessity for export was fully recognised, also continuity of supplies to export markets.

Citrus Growers' Conference.—At the last Citrus Growers' Convention held at Mildura, it was decided to approve of holding the next convention in New South Wales.

The Federal Citrus Council, after considering the proposal to hold the convention at Gosford, N.S.W., has decided that in view of the economic position, this proposed convention be postponed.

It was suggested that an Interstate Citrus Growers' Conference be held at Leeton towards the end of January next for the purpose of discussing export and other allied subjects.

PERSONAL.

Mr. R. E. Downie, of Adelaide, is joining the Gerrard Wire Tying Machines Co. Pty. Ltd. organisation as General Sales Manager, with headquarters at Melbourne. Mr. Downie has for a number of years been associated with Gibbs, Bright and Co. Ltd., Adelaide. He was first Manager and Secretary of the Murray River Wholesale Co-operative Co., and the success of this organisation was greatly due to his efforts. The Gerrard Wire Tying Machines Co. Pty. Ltd. are to be congratulated in the augmentation of Mr. Downie to their staff. He is well-known and very popular amongst every class of fruit grower.

Mr. D. P. Murray has been appointed Manager for New South Wales for the Gerrard Wire Tying Machines Co. Pty. Ltd., and has moved to Sydney.

Mr. A. G. Gerrard leaves on a trip to England and the Continent by the R.M.S. "Orama" early in December.

Captain Pearse, representative of the Port of London Authority for Australia and New Zealand, arrived in Melbourne on November 24, en route for Western Australia, and afterwards, Tasmania.

* * *

Mr. H. Broadfoot, of the N.S.W. Department of Agriculture, who recently returned from a visit to the United Kingdom and the Continent, has prepared a valuable report on the subject of the overseas marketing of Australian fruit.

* * *

The Minister for Markets (Mr. Parker Maloney), has been very active while in England in his endeavors to improve the trade for Australian canned and dried fruits.

SOUTH AUSTRALIA.

Gumeracha.

20th November, 1930.

Apples are grown in the principal export varieties; Pears, "Williams" (or "Duchess") largely preponderating, with a small proportion of later keeping varieties. Plums in fairly large quantities, and consisting of the leading jam and drying sorts.

Apple and pear crops will be light to very light throughout this district, present indications pointing to not more than 20 per cent. of last season's crop. In many orchards it will be very much below that percentage. Plums are in most instances carrying a good to heavy crop; unfortunately the prospects of a profitable outlet for the fruit are very poor, and the probability is that most of the crop will have to rot under the trees.

There is little else to report. Most growers are putting in varying areas of tomatoes and potatoes, etc., in the hope that these will in some measure make up for the very unpromising outlook for income from other sources.—J. B. Randell.

CHRISTMAS—THE SEASON OF GIFTS.

Designed with the object of helping givers of Christmas gifts to make appropriate and pleasing selections, Mesrs. Calder's, a Melbourne jewellery firm, have produced a comprehensive catalogue illustrating a large number of their values.

Readers of "The Fruit World" are invited to write to Messrs. Calder, Finks Buildings, 6a Elizabeth-street, Melbourne, for a copy of this catalogue, which will be sent post free and without any obligation to buy.

THE CANNED FRUITS INDUSTRY.

Desperate Position Revealed.

CANNING FRUIT GROWERS are facing a most serious crisis. The co-operative canneries have notified growers that they can only take half the growers' fruit this season, and for such fruit as would be accepted the price would be £5 per ton.

This news was received by the growers with consternation. Growers state that they cannot pick their very choicest fruit and deliver it to the canners at £5 per ton. It would be cheaper to let the fruit go to waste.

The present stocks of canned fruit are more than sufficient for Australia's requirements for the whole of next season. The proprietary canners are only taking a fraction of their usual requirements.

It is understood that the State cannery at Leeton has offered the growers £7 to £8 per ton for Peaches and about £7 per ton for Apricots.

The Northern Victoria Fruitgrowers' Association carried a resolution stating that the offer of the co-operative canneries had "sounded the death-knell of the industry."

Meetings of traders have been held in Shepparton, Kyabram, and Goulburn Valley towns, as they realise that any failure in the first industry will bring widespread ruin.

A proposition is being made to the State and Federal Governments that a substantial pack be canned at cost price, the financing of same to be the care of the Federal and State Governments.

Goulburn Valley growers hold that the Government is to blame for the heavy overplanting of fruit trees, and that it is encumbent on the Government to provide the necessary relief.

Now, with low world prices and general depression the crisis has been reached. The high price of sugar over the years has detrimentally affected the fruit industry. Even now, if sugar could be made available at £18 per ton (the world's price plus duty), the situation would be relieved.

The hope is that if this season could be tided over the world situation may improve, while Australia would benefit from any Empire reciprocity plan.

Goulburn Valley growers are thoroughly aroused over the present situation, and it is certain that prominent public attention will be directed to this subject and pressure brought to bear on the Government.

THE SUGAR EMBARGO.

The Sugar Enquiry Committee is having a strenuous time, investigating the several phases of the sugar industry and its relation to other industries in Australia.

The Committee will sit and hear evidence in Melbourne from December 2 to 7. The Sugar Consumers' Association and Fruitgrowers' Associations are busy with the preparation of evidence.

So far the Queensland witnesses have tendered evidence not only in favor of the continuance of the embargo, but also stating that it is impossible to reduce the present price of sugar.

Koondrook.—Much damage to Grape vines was caused by a plague of caterpillars in early November.

A good crop of Apricots is expected, but other fruit will be light. An exceptionally good crop of Tomatoes is expected.

VICTORIAN APPLE CROP.

About 40 Per Cent. of Normal.

Last year Victoria harvested around 3,000,000 bushels of Apples. In the coming season Mr. J. M. Ward, Superintendent of Horticulture, estimates on present appearances a crop of Apples at between one and one and a half million bushels, or 40 per cent. of last year.

Bairnsdale.

Unless the late flowering varieties, such as Five Crown (London Pippin) and Rome Beauty, set well, the apple crop in the district will not be half normal. Stone fruits, on the other hand, are showing up remarkably well. So prolific is the apricot crop that hand-thinning is necessary.

Pomonal.

The principal fruit hereabouts is the apple—varieties, Jonathan, Cleo, Dunns. The coming crop appears to be extremely light. Great interest is being taken in tobacco growing in this district.

APPLE PACKING COMPETITION.

Shield Won by Harcourt North.

THE HANDSOME SHIELD presented by the Fruit Exporters Handling Committee for best apple packing by State School scholars attending the classes conducted by the Department of Agriculture, has been won by Harcourt North. The shield is to be presented by the Superintendent of Horticulture (Mr. J. M. Ward) on November 28th.

The Harcourt North School won the competition at the Royal Agricultural Show, and a similar competition at the Bendigo Show recently against all comers.

Harcourt North is to be congratulated on its meritorious performance.

Chemical Dusts for Pest Control.—Messrs. N. N. McLean Pty. Ltd., Wholesale Fruit Merchants and Exporters, of 50 William-street, Melbourne, report that there is a steadily increasing demand for chemical dusts for fruit trees and vegetables. The efficiency of the dusts for controlling insect pests and fungoid diseases is appreciated by growers; the ease of application is also a favorable feature.

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PERSONAL.

We have been advised by Mr. C. W. Joyce, State Secretary, Returned Sailors and Soldiers' Imperial League of Australia, that Mr. William Jackson, of Gonn Crossing, Victoria, has been appointed as the League's representative on the Orchard (Irrigable) Board. We congratulate Mr. Jackson on this appointment.

M. ASVARISCH

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SPECIAL NOTICE TO FRUITGROWERS

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms carrying on business in the

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GROWERS PROTECT YOURSELVES by consigning to members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA.

Correspondence is invited by the Association. **J. D. FRASER, Secretary, 422-428 Collins St., Melbourne**